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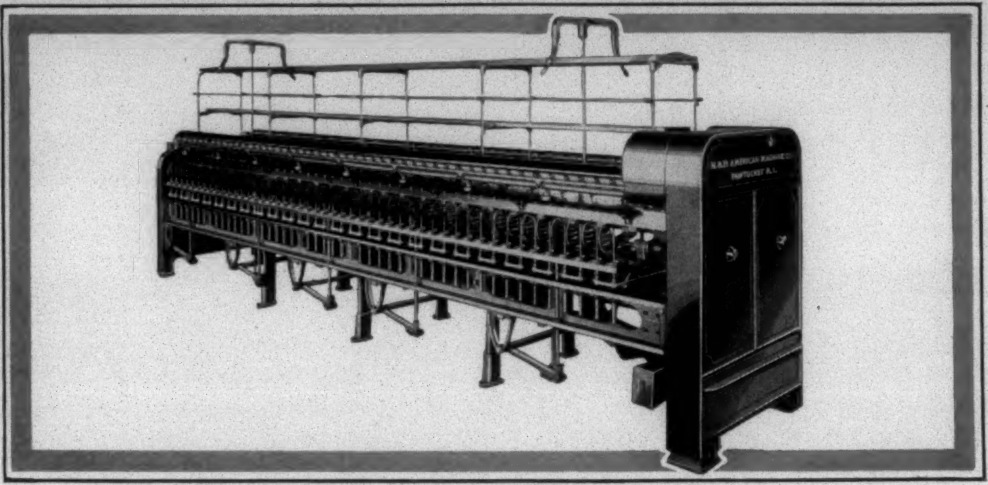
SOUTHERN TEXTILE BULLETIN

VOL. 43 CHARLOTTE, N. C., OCTOBER 27, 1932 No. 9



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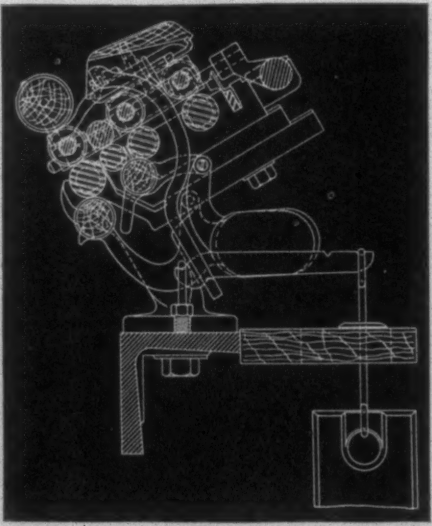

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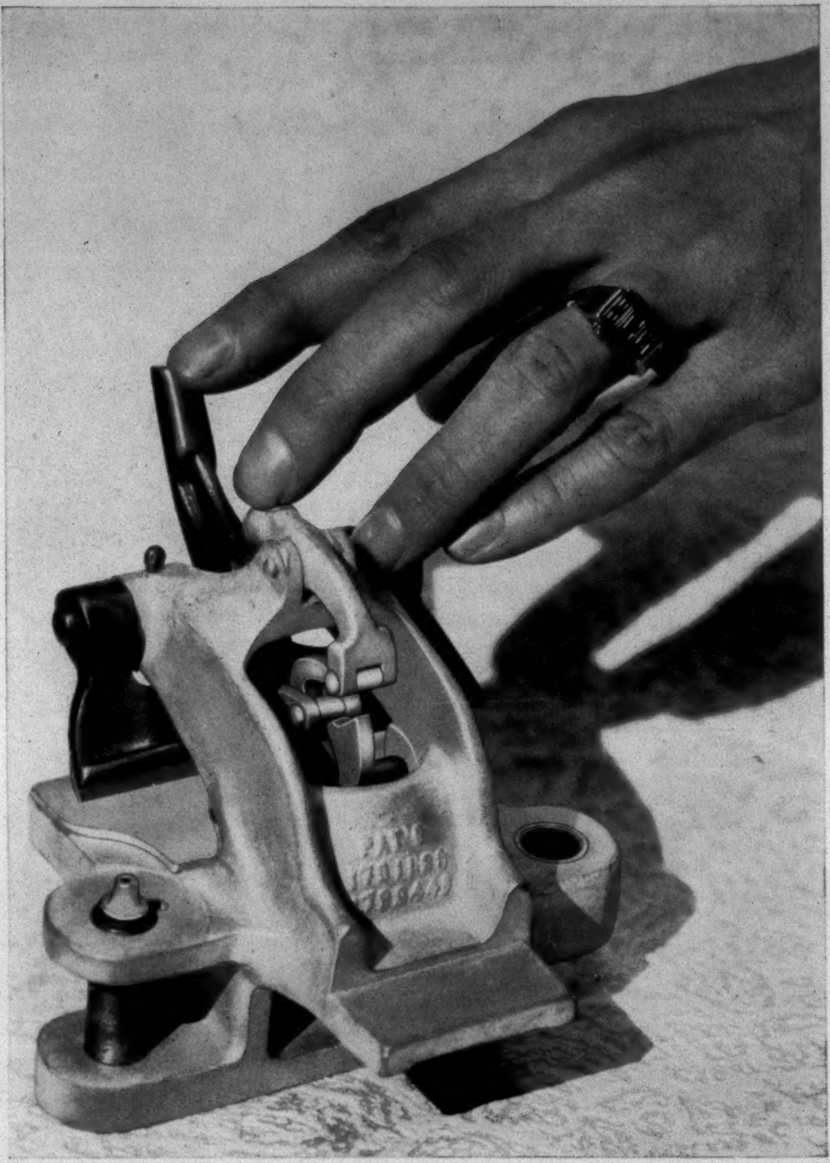

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VOL. 43 CHARLOTTE, N. C., OCTOBER 27, 1932 NO. 9

A Basis For Profits [*]

BY GEORE A. SLOAN

President of the Cotton-Textile Institute.

In the past we have attempted to present to the annual meeting a detailed account of the Institute's activities during the preceding twelve months. On this occasion I shall depart from that practice and rely upon your examination of the Institute's annual report for a review of our work.

While I hope that in our discussions today we will especially concern ourselves with the present situation and the opportunities within the industry for stability and profits, I believe it will be of value to relate briefly some facts brought forth in a special investigation which the Institute is now conducting.

During the past six months our field agents have devoted much of their time to an industry-wide survey of cost methods and operating policies. Thus far these efforts have been confined to the South but it is our purpose to cover other sections of the industry as promptly as our facilities will permit.

The survey already includes 767 mills from Virgiinia to Texas representing a total of approximately 17,200,000 spindles. Comprehensive information was obtained from 712 of these mills, representing 16,150,000 spindles, data being unobtainable in the remaining cases—either because a mill had been closed for a long period, was in process of liquidation or, in a few remote instances, because of the unwillingness of the management to provide information.

In respect to cost methods it was found that approximately 61 per cent of the mills, on a spindleage basis, are reasonably well informed as to the costs of their various products. This denotes a great advance in the prevalence of proper cost systems during recent years, as our estimates, based on the best available advice, indicate that in 1925 adequate cost methods were employed by not more than 26 per cent of these same mills.

As to operating schedules, this canvass has developed some equally useful information. On a spindleage basis, a standard operating schedule of 55 hours for the day shift is observed by 89 per cent of the mills consulted. A standard 60-hour schedule for day operations was indicated in only 8 per cent of the mills. Forty-three per cent of these mills normally operate a regular night shift. Of this night running spindleage 49 per cent regard a 50-hour night shift as standard while 39 per cent (of the above 43 per cent operating night shifts) observe a night schedule of 55 hours.

In spite of the publicity recently given to increased night operation, this study brings to light a definite tendency on the part of many mills to abandon night operation, 18 per cent of those consulted (comprising 2,500,000 spindles) having, within recent years, eliminated regular night shifts and adopted exclusive day operation.

It is our intention, when this survey has been completed for all sections of the industry, to prepare an analytical report embodying much of the valuable information which it has disclosed, at the same time avoiding any statements regarding the policies at individual mills.

Meanwhile, the data already compiled are exceedingly useful in enabling us more accurately to appraise the problems of the individual mills as well as those of the industry at large. They have been particularly helpful in keeping the Institute currently informed as to the observance of our major recommendations.

One of the most important objectives in the Institute's educational work is the development of a mental attitude of sufficient breadth and flexibility to keep production constantly balanced with demand. Other problems have been clearly recognized but we continue to regard the avoidance of overproduction as the first step toward orderly and profitable merchandising. From the very beginning the educational efforts of the Institute have been devoted largely to this problem. The industry's statistics, chiefly comprising medium and fine goods, clearly prove the extent to which the mill executives have responded. Undeniable progress has been made. Overproduction was present in 1928 and again in 1929, when production exceeded the amount of goods billed. The tide turned in 1930, and in that year, in 1931 and to date in 1932, billings have exceeded production. These facts are written in the record and they stand as a high tribute to those mill executives whose understanding, vision and co-operative effort made them possible.

I am not unmindful of a decided decrease in the industry's spindles. From the peak in 1924, when there were 37,939,772 spindles in place, there has been a shrinkage to 31,643,898 spindles, a decline of 16.6 per cent in eight years. But we cannot overlook the promptness with which the average running time of the remaining spindles can be, and in many cases has been, increased. The steping up of spindle activity was especially marked in the first three months of 1929 when the running time per spindle was 30 per cent greater than that of a few years earlier.

During the past two years per capita consumption of cotton goods has materially declined due largely to the decreased demand for heavy industrial fabrics and to curtailed purchasing power. This decrease has amounted to 30 per cent compared with 1927, whereas the decrease in the number of spindles in place since that time has amounted to but 15 per cent. Obviously the results achieved in avoiding overproduction are in no sense due to the application of the "survival of the fittest" theory. They are due primarily to intelligent self-restraint in respect to operating schedules.

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[*] Address at the Seventh Annual Meeting of that organization, New York City.

The records show that this year's production of carded and combed fabrics (excluding heavy industrial goods) has amounted to 70 per cent of the 1929 production for the same period. Sales to date this year have been substantially ahead of production and have amounted to 82 per cent of the 1929 production for the same period. Moreover, sales have been greater than last year and greater than two years ago. Another favorable development is the excess billings of goods over production, billings having amounted to 75 per cent of the 1929 production. Owing to these excess billings, stocks have been greatly reduced since January 1st and, according to the latest reports, are the lowest recorded for several years. In fact at the end of September they were 46 per cent less than the three-year average for this date. Considering the state of business in general, this is a remarkable showing.

So much for the volume of business. Unhappily, in the face of this relatively high demand, there has been little or no profit, even in the month of August when we experienced the heaviest demand. The industry has not yet become profit-minded. One mill president stated publicly: "Our sales were enormous but at prices that were extremely unattractive and in most cases unprofitable." I take it that this experience has been common to many.

Granting all that can be reasonably charged to the depression and the difficulties involved in trying to make money when industry and agriculture generally are losing money, these developments nevertheless reveal an inherent weakness in our industry. They throw emphasis not upon how many yards are actually sold and the relation of production to sales but upon how many yards can be profitably offered for sale and justifiably manufactured. In the final analysis potential overproduction rather than actual overproduction is the ruling factor. The capacity for production is unquestionably larger than any demand that has ever developed. Some may not share this opinion but who can place a limit on the development of night work?

We gained insight into the possibilities of night work in the increasing number of mills which organized a second shift up to 1929. If we assume that all spindles in the South work double shift and the Northern spindles work only single shift there would be no employment, on the basis of demand during the last several years, for at least eleven million spindles. Indeed, the demand during the past two years would not have afforded full day time operation for all the spindles.

With sales and shipments so definitely in excess of production the evidence is plain that compared with previous years when chronic overproduction prevailed, the industry is making progress toward adjusting production to demand; but the evidence is equally clear that there is still the unsolved problem of excess capacity. You have been told many times of our persistent efforts to take up the slack through dramatizing the versatility of cotton—through stimulating the public's appreciation of its manifold uses—through advertising, exhibits, style shows, the radio, motion pictures and other channels of communication. All such efforts have amply proved their value in helping to maintain, during the depression, the relatively high demand for our products. Their continuance is vital but it is equally necessary that they be supplemented by a conservatism in operating policies which measures production in terms of profits.

It may occur to some that the industry has no right to be satisfied with figures showing a successful balancing of production during the last two years because it may seem to have been an unprofitable policy for many mills. But will it be unprofitable in the long run? Is it unreasonable to expect that profits will follow in logical sequence? I prefer to think that the industry has established a foundation upon which a profitable business structure can be built. I prefer to think that a few years' preparation is none too long, provided the mill executives continue the long-range planning to which they and the trade are becoming more and more accustomed.

During the past two years you have curtailed drastically and many of you have lost money. Meanwhile a small minority that did not curtail may have, according to rumor, made money. The first impulse after such an experience is to condemn as futile all efforts of this kind but more sober thought raises the question as to what the consequences would be in the absence of intelligent self-restraint. No matter what your answer will be to that question the fact remains that the industry's basic position has greatly improved and to such an extent that it will emerge from this depression with a clearer perception of its responsibilities and opportunities as one of the major industries of this country.

It is my belief that conditions this year would have been indescribably chaotic if the rank and file of mills had been governed by no other impulse than to reduce costs by running as near full time as possible, irrespective of demand. Under such conditions a tremendous increase in inventory would have been inevitable. But that did not happen. During the past two months we have seen buyers operating in our markets with confidence. And the industry itself, through its curtailment of production and liquidation of excessive stocks created this confidence.

We are told by men in all walks of public and business life that our country today is facing an emergency as serious and as unsettling to our security as that which threatened the nation during the World War. Any relaxation of co-operation at a time like this—any questioning of the value of co-operation—any temporary yielding to that malignant catch-phrase "survival of the fittest" will serve only to weaken the industry's most effective weapon in maintaining and strengthening the present hard won basis for profits.

Our mills and selling agents have devoted a great amount of time and effort to co-operation. Those of us who have been fighting for this cause are fully aware of the obstacles that stand in the way or more complete realization of our objectives, of the growing need of "teeth" in co-operative measures and of the conviction among countless business men that some legal way must be found for bringing about a more general acceptance of those policies affecting industry and labor which have the unqualified support of the public and of a preponderant part of the industry. To be more specific, if certain elements within our industry continue to show an unwillingness to co-operate and an utter disrespect for trade and public sentiment, it is inevitable that some way will be found to bring about a more uniformly moderate work week and a more general confinement of production to daylight operation. Whether this will come

(*Continued on Page* 33)

Spinning in General, Sanforizing in Particular*

BY R. W. ARRINGTON

Vice-President, Union Bleachery, Greenville, S. C.

I HAVE been asked to present a paper before this meeting on some phase of my own business. The invitation carried with it the privilege of selecting my own subject. I have, therefore, selected for discussion a subject in which we are more interested at the present time than any other subject, namely, the question of the shrinkage of cotton piece goods and I hope sincerely that you may find in it something that is of at least some interest to you.

I realize my audience is made up almost entirely of cotton mill men, and while any finisher will tell you that at least 90 per cent of his troubles are due entirely to the cotton mill, although you would agree that he was one hundred per cent wrong. I don't believe the question of shrinking by a finishing plant is as much dependent upon the cotton mill as proper results in other finishing operations. You will nevertheless be interested, I am sure, in what is taking place in all phases of textile processes.

There is one point on which we will doubtless all agree, namely, that the shrinkage of cotton piece goods is one of the most serious obstacles in the way of its increasing popularity with the public. The present day cotton fabrics have developed style, beauty, wearing quality and price, and if there can be added to those advantages the further advantage of complete shrinkage, then this additional feature certainly should make for increased sale.

In my opinion, not since the adoption of fast colors on cotton has there been added a greater advantage than that of complete shrinkage to all practical purposes. In making that statement you probably shrug your shoulder or turn the cuff of your sleeve up for the purpose of laughing into it because you remember only too well the shirt you bought at a store where the merchant told you it would not shrink and then you found to your sorrow, after it had been washed, that the collarband choked you until you were blue in the face. Or possibly you remember that pair of white duck pants which had a label on it saying it had been supershrunk but which after the first washing you could hardly get into. I don't blame you one particle if you have that feeling because I know countless people have had just that experience because, unfortunately, the shrinking of cotton piece goods is now going through the same stages of development and of education which fast colors went through a few years ago.

There was quite a period of time when a fast color label on a garment, unfortunately, did not mean a great deal, due possibly to improper application of color or the fact that many unscrupulous people put out fabrics which were not dyed with the fastest kind of colors, but labelled them as fast. Too many times they would figure that they would put out a garment with a fast color label, even though the color were not fast, appreciating at the time public psychology and knowing that nine people out of ten, after the garment did fade, would simply shrug their shoulders and say, "I thought so," and let it go at that. When the tenth one did take the trouble to return the garment of course it was made good, but the producer was considerably ahead of the game. I am pleased to advise that that practice has now gone very largely into the discard and, as a general rule, today when a garment is labelled "Fast Color," whether it be a print, a solid dyeing or a colored yarn fabric, usually it means that the color is fast.

Shrinking today is going through very much the same process of development. Much has been learned about the shrinking of cotton goods but vastly more is still to be learned. So-called shrinking has been practiced on cotton goods for a number of years, but it has never until recently been taken very seriously. It has been more or less a half-hearted, halfway sort of job and did not represent complete shrinkage as we know it today.

We ourselves have had a water shrinking process process which we have used for a number of years, but frankly it is, like a great many others, only a halfway job, and when I say halfway, I mean almost literally that because we have found that an average heavyweight bleached fabric, such as a duck, a heavy twill or similar fabric, in a regular unshrunk finish will show a shrinkage to a laundry test of about 8 per cent. The same fabric when subjected to our water shrinking process will show a shrinkage to a laundry test of about 4 per cent. It is almost truly, therefore, a halfway job, and many other processes are on about the same basis of perfection.

That kind of process of course is considerably better than an unshrunk job. It has the advantage of being cheap and it enables the converter to sell his goods as being shrunk and enables the garment manufacturer to put a label in the garment reading, "Supershrunk," "Guaranteed Shrunk," "Coldwater Shrunk" or some other high-sounding expression.

It does not though make toward consumer satisfaction, and it is that kind of shrinking which I frankly admit we, too, have been a party to that makes you raise your eyebrows or shrug your shoulders when I talk about complete shrinkage to all practical purposes. It is not my intention to cast any reflection on any particular process because certainly I have no particular one in mind. The fact remains, nevertheless, that much has been done to abuse the public's mind from the standpoint of shrinkage and much remains to be done to disabuse that same mind and to get over to the public in a constructive way the fact that complete shrinkage to all practical purposes is an accomplished fact.

You are probably wondering, "What is this process that is so much superior to other processes previously in use?" My answer to that is *Sanforizing*. Sanforizing gets its name from the first name of the man who invented it, Sanford L. Cluett.

One could talk for a very long time on the mechanical features of the sanforizing equipment, all of which I am afraid would be most uninteresting and, at the same time, it would be very difficult to paint a word picture which would mean very much to you. Briefly, the sanforizing machine is composed of a 90-foot tenter frame which is placed in front of a Palmer machine with various attachments such as steam jets, atomizers, electric shoes and other things, the details of which would take entirely too long to even try to describe. There is, however, no secret about any of it and we would be very glad to see anyone at our plant at any time for the purpose of seeing the equipment.

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*Address before Southern Textile Association, Greenville, S. C.

The action of the machine is almost entirely mechanical, and what little moisture is used is not for the purpose of shrinking the goods but purely as a means to an end, namely, to make the fabric pliable so that the individual threads can be mechanically moved.

As the process is mechanical and any degree of shrinkage can be secured, it naturally becomes necessary first to know how much shrinkage is in any particular fabric so as to know how much to remove. The first thing done, therefore, when a lot of goods is ready for sanforizing, is to take out two or three samples from the lot at random, mark them with indelible ink and then subject them to a regular laundry washing in a small machine which is used for that purpose. After washing the samples are carefully squeezed without any wringing action, as that would distort the threads, spread out on a screen and allowed to dry. After drying the sample is lightly atomized and pressed with an electric iron by raising and lowering the iron and not by rubbing. The sample is then again measured and by comparison with the original measurements it is determined exactly how much shrinkage it is necessary to remove both in warp and filling.

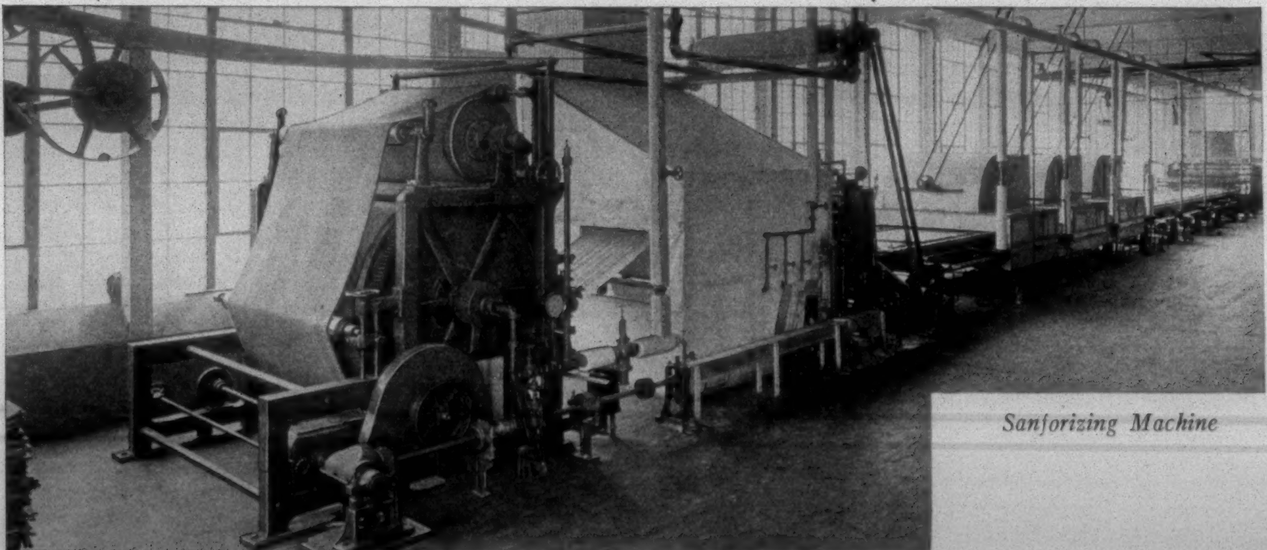
The goods are then run and samples taken at intervals throughout the lot coming off the machine and subjected to the same laundry test for the purpose of determining whether the predetermined shrinkage has actually been taken out. Usually we find that it has. If on an occasional lot it is found to still contain shrinkage above the allowable tolerance, the goods are put over the machine again and are not checked out until the wash test mentioned above has been made and the particular lot is found to pass muster.

I mentioned above the question of certain tolerances. Naturally tolerances are necessary in any mechanical process and the tolerance laid down by Cluett, Peabody & Co. is a tolerance of three-quarters of one per cent either overshrunk or undershrunk. It might seem strange to think of a fabric being overshrunk, but it is easily possible to overshrink a fabric and have it get longer when washed. We have to watch that feature as closely as we do having it undershrunk. Slight tolerances are also necessary not only because the process is mechanical but simply because no two pieces of cloth, as you gentlemen all know, are identical. They might have been woven with different degrees of tension or received different degrees of tension in our bleaching and finishing processes. This will naturally make the characteristics of any two pieces of cloth slightly different. If, therefore, we have made our wash test on certain pieces, it does not follow that every other single piece in that lot is going to be identical with the pieces which we have tested. A great many pieces are finished to exactly zero in both warp and filling, but the tolerance mentioned above, as you can readily see, is necessary. This tolerance represents only ¼ inch in 36 inches, and I think you will agree that a variation as small as that would never be noticed by the user of any garment.

We have found a tremendous variation in the shrinkage characteristics of different fabrics and even the same fabric from the same or from different mills will vary from lot to lot. We are never able, therefore, to set up a standard on any given construction but must check every lot of goods both before and after shrinking to be sure that the job is properly done.

We have had degrees of shrinkage on different fabrics varying, I should say, from about 2 per cent up to as high as 15 per cent. It might surprise you to know that a fabric like a blue denim, for instance, usually contains approximately 10 per cent shrinkage. That means about 4 inches in 36 inches.

We have also found a decided difference in the elasticity of fabrics which are bleached prior to sanforizing as compared with unbleached fabrics which are sanforized only, such as chambrays, hickory stripes, denims, coverts and fabrics of that general nature. That of course is to be expected because on the unbleached fabrics none of the waxes or other impurities are removed, which naturally leaves the fabric much more elastic.



Sanforizing Machine

We have found also that certain fabrics continue to shrink slightly even after the first washing, sometimes it requiring as high as three or four washings to get absolute and complete shrinkage. In cases of this kind it becomes necessary for us to slightly overshrink the goods in order to make allowance for this differential.

The question of starches, sizing and finishing material used both at the grey mill on unbleached fabrics and at the finishing plant on bleached fabrics is quite an important consideration in the whole picture.

We think we have learned a good deal by experience about these various points, as well as others, but realize at the same time that we have only just begun. Even at the present stage of development a lot of educational work still needs to be done with the garment manufacturer, the laundry and even the consumer himself.

A garment manufacturer, for instance, can largely destroy proper shrinkage by improper handling in his factory. If his girls on sewing machines stretch the goods in sewing them, as they could very easily do because the fabric is naturally elastic after being shrunk, the garment upon being washed will shrink and the consumer very properly is dissatisfied because all he knows is that they told him at the store the garment would not shrink and it did shrink. A great many garment manufacturers have already found that a fully shrunk fabric is a horse of a little different color from an unshrunk fabric when it comes to his manufacturing.

Even if the shrinking is properly done and the garment is properly manufactured, the laundry can still largely destroy the effort put forth up to that point by improper laundry methods. We have had cases where certain garments were reported to shrink with the first washing but to get larger with a second washing. This is undoubtedly due to abnormal stretching of the garment while in a damp condition at the laundry. Likewise, if the garment is subjected to excessive use of chemicals such as caustic soda or gets excessively rough handling in other ways, naturally there will be some shrinkage because our tests are based on normal washing operations and are figured as an average treatment that a garment will get in a power laundry. We can shrink a fabric so that it will stand these treatments if we know what those treatments are, but naturally it is impossible to control them when the individual laundries are scattered throughout the length and breadth of the land.

Some people seem to have the impression that a fabric if properly shrunk should not change in dimensions irrespective of any or all possible treatment or handling that it might get after being shrunk. In other words they expect it to remain almost like a piece of sheet steel. That of course is an absolutely foolish expectation because the very nature of a piece of cotton cloth is one of elasticity, and it is for these several reasons, therefore, that I say that educational work needs to be done with everybody who has a part in producing the garment and in fact with the laundry and the consumer after the garment has been bought.

All of these things cannot be accomplished in the twinkling of an eye. It will probably take several years to sell everybody along the line on the proper handling of shrunken fabrics and garments. It is my opinion that before many years consumers will demand from their merchants garments that will not shrink, whether they be shirts, underwear, cotton suits, ladies' dresses, children's clothes or even work clothing garments like overalls.

We naturally think that sanforizing is head and shoulders above other shrinking processes. We think this is pretty well proven by the increase in demand during the last couple of years. Starting with four original plants which were licensed by Cluett, Peabody & Co., the licensees today number either sixteen or seventeen. Our plant started with one machine and now has three. If this development can be made during a period such as we have had for the last two years, the development should be even more rapid with the return of normal conditions.

In addition to believing that in a very few years consumers will demand fully shrunk garments it is my belief also that sanforizing will eventually bbecome a standard finishing operation such as mercerization is today.

I hope I have not overstepped the bounds of propriety in discussing the "Sanforizing in Particular" section of my subject, but it is of such tremendous interest to us that I more or less assume it must be to everybody else.

I trust I have been able to say something which you have found of interest.

Bedspread Stocks Are Low

At a well-attended meeting of the Bedspread Group of the Cotton-Textile Institute, it was brought out that stocks of bedspreads were lower than at any time since compilations were begun in January, 1928. The relationship between stocks and unfilled orders was also found to be more favorable than at any time since that date. During the last three months sales of bedspreads have amounted to 177 per cent of production.

The following recommendation was unanimously adopted:

That we regard as unsound practices—

1. The accumulation of stocks, in excess of unfilled orders, of more than four weeks' average production. (1932 production regarded as the basis for average.)

2. The sale of bedspreads below the cost of production.

A review was presented to the meeting of the accomplishments of the bedspread group under the chairmanship of R. W. Bennet, of Bliss Fabyan & Co., Inc., during the last twelve months. One of the most important was the recognition among the individual mills of uniform sales terms. Also, through the functioning of Trade Practice Committee, piracy of design has become a thing of the past.

The decision of bedspread mills to open their lines in the second week in January, instead of having scattered openings over a considerable period, is looked upon in the trade as an outstanding achievement of the group.

Shipments of bedspreads on consignment have been discouraged, a resolution having been passed that such shipments constitute an unsound practice. As a result of group discussions, steps are now under way looking to the standardization of widths of bedspreads used by hospitals, hotels and institutions.

The following were in attendance: R. W. Bennet, Bliss, Fabyan & Co., Inc.; E. A. Raffnell, Bates Mfg. Co.; J. B. Yates, Burlington Mills; C. E. Neisler, Neisler Mills; H. E. Carls, Cannon Mills; Edward H. Jones, Pelzer Mfg. Co.; T. B. Fitzgerald, Iselin-Jefferson Co.; L. A. Vaught, Frank M. Bennet Co.; R. L. Whitman, Clarence Whitman & Sons Co.; J. E. England, Carolina Cotton and Woolen Mills; F. D. Goode, Monadnock Mills; Percy Hopple, Mill Associates, Inc.; T. E. Ramsdell and Jas. M. Farrar, Monument Mills; Paul B. Halstead, secretary, the Cotton-Textile Institute, Inc.

The Development of Auxiliary Services to the Textile Plant *

BY EUGENE W. O'BRIEN

Editor Southern Power Journal, Atlanta, Ga.

FROM my lay viewpoint—though it be an interested and casually informed viewpoint—I have always marvelled at the stability of the textile process of cloth manufacture, a stability of fundamentals which probably approaches finality as closely as man's ingenious invention has ever approached it. When we think that the fly shuttle was invented in 1733 by John Kay, the spinning frame in 1769 by Richard Arkwright and another John Kay, namesake of the first, and the power loom in 1785 by the Rev. Dr. Edmund Cartwright—and that these are still the basic mechanisms in the textile process, there is reason enough to marvel. I know of no other fundamental process which has so long resisted the ambition and ingenuity of man to better. The textile process in its fundamentals remains practically the same today as that which lead industry from the handicraft stage into the machine stage. True it is that there have been many improvements, particularly in simplification of process, reduction in operations, and mechanization, but the fly shuttle still carries the filling back and forth, and different speed rollers and revolving spindles still draw and twist the cotton fibre.

Yet despite its stability and its resistance to all attack, the process would have amounted to little were it not for the development of auxiliary engineering aids. It would have attained but a small part of its present accomplishment if power had not been made available in generous and convenient supply, if efficient, controlled heating, humidity and lighting had not been devised. Much of the improvement in the process itself has been made possible and been dictated by these advances in auxiliary services. They are responsible for the recent trend toward heavier equipment, more accurate fits, higher speeds. They have given better quality of goods at hgiher rates of production and lower costs.

Perhaps the greatest factor aiding the full development of the textile process has been power. When Kay developed the fly shuttle, there was only man power. While the efficiency of the human body is higher than that of any prime mover yet devised, being estimated at 40 per cent, as against the steam machine at 20 per cent and the Diesel at 35 per cent, it lacks capacity, developing perhaps one-tenth of a horsepower under ordinary conditions. Power in greater quantity and convenience was needed for textile development. So well was this recognized that the spinning frame was originally called the "water-frame," because it required water power for satisfactory operation. This recognition also led to the application of the steam engine to the textile industry before any other, in 1765.

Since that time, some of the leading developments in power equipment have taken place in the textile power plant, instigated by textile demands for power. It was with the textile industry in mind that Corliss developed his revolutionary type of engine; he was the first to dare use the high pressure against which Watt had warned. There are many plants here in the South in which Corliss installed his engines on a "payment from fuel saving" guarantee.

With this development of steam power has come marked improvement in the boiler room. The average old plant featured the horizontal tubular boiler, low set, hand fired, with open ket well and duplex boiler feed pump. These have been replaced by the water tube boiler, particularly in its new low-head type, set over a large furnace, the automatic stoker or unit pulverizer, the deserating feed water heater and centrifugal feed pump, all operated under improved manual or automatic control. Steam generating equipment operates now at higher pressures and higher ratings, at less cost per unit of output, and less maintenance per unit of capacity. Even old units have been spruced up by increase in furnace volume and addition of automatic combustion equipment. I can cite numerous instances of such plant betterment, made possible principally through improved furnaces, modern stokers and unit coal pulverizers, and better control.

Such modern equipment and plant betterment have made advisable a more careful scrutiny of the fuel used. In many cases, they have made possible the burning of a much less costly fuel. The economies of such a move have been subject to check through the use of regulating, indicating and recording instruments now readily available. The textile plant of today has no right to consider such instruments, gaues, flow meters, CO2 recorders, etc., luxuries, extras, and the power plant a necessary evil. In many mills, more savings can be made in the power plant than can be made in the productive department.

There has been great development of savings in the transmission of power from the prime mover to the driven machine. Where mechanical transmission still exists, there has been marked simplification of the systems of headshafts, countershafts, counterbelts, machine belts, etc. Shorter lengths of shaft, ball bearing hangers, improved couplings, light weight pulleys, etc., have made transmission much more efficient.

More revolutionary is the development of electrical transmission, and of the electric drive of production machinery, either by groups, with one motor driving a number of machines through a simple arrangement of countershafts or by individual machine drives. In changing over old mills from mechanical drives of the old style to electric group and individual drives, from 3 to 15 per cent savings in power have been secured. Compared with the old mechanical drives, electric drive means reduction of belt slip, friction, and the torsional whip of long shafts; it gives constant machine speed, flexibility of machine drive, reduction of belt and shaft wares, and other advantages. Individual drives give these advantages their highest value, but must be carefully studied as to load factor, and initial and operating cost. Group drive,

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*Address before Southern Textile Association, Greenville, S. C.

with electric motor, is often the more economical, when designed along modern lines.

Control of electric drives has progressed greatly in recent years, aiming at simplification, safety, positive operation and low cost. The magnetic switch is now used on small and moderate sized motors to replace the oil switch. Remote control, located to suit the convenience of the operator is in deserved vogue, and has made possible many savings in labor and material expenses.

In the actual transfer of power from motor to machine, great stimulus has resulted from the individual motor trend. The demand has been for positive transmission, with enough flexibility to avoid jerks and strains to motor and machinery. On some equipment like the loom, the gear and pinion drive has withstood the challenge, but in other cases, it has been replaced by the silent chain drive, absolutely positive and strong, by the V-belt drive, smooth, positive, noiseless and low-cost, and by short center drives using flat belts, with required pulley contact maintained by weighted pulleys, springs pulleys or pivoted motor bases. Anti-friction bearings on machinery and on motors have helped to make many short-center, motor to machine, drives practicable.

A particularly interesting motor-to-machine drive is a new development designed to give variable speed of the spinning frame. Under the usual constant speed condition, because the tension on the yarn at the traveler is greatest at the smallest diameter of the bobbin, a traveler must be selected which is heavy enough to meet the constant speed when the bobbin is empty. As the bobbin fills, the tension of the yarn decreases, and the speed could be increased proportionately, increasing production and giving a uniform twist throughout the bobbin filling. A variable speed drive is now available to simulate this desirable effect, and is claimed to give 15 per cent greater production and a more uniform product.

Heating of the textile mill is almost as much a question of process conditions as of comfort conditions, and in recent years has been brought under comparatively accurate control. In the old days, a central fan blast heating and ventilating system was in vogue, consisting of a large fan which drew air from the outside through steam heated pipe coils, and forced it through concrete or masonry dusts into the base of vertical chimneys, located at intervals in the side wall of the mill. From these chimneys, there were openings which discharged the heated air to each floor, usually at a velocity of 2,000 to 3,000 feet per minute. This system was an excellent one in its day, performing the function of ventilation as well as of heating, but the steam coils which made up the heating element stopped up with scale, sediment and dirt, and were hard to maintain in good condition, while the installation itself, because of the duct and chimney construction involved, was very expensive. It was succeeded by high pressure pipe coil systems, with direct radiation—then by medium pressure gravity return systems—then by vacuum systems, using low pressures for the steam supply and vacuum pumps to assure return of the conrensate.

The latest development, and a deservedly popular one, is that of unit heaters, which amount to small localized fan blast heating systems, without the ducts and expensive construction of the central fan blast system. There are two basic types; the blow-through type with a disc fan blowing air through a heating element, and the draw-through type, employing one or more centrifugal fans, to draw air through the heating elements, and discharge it through direct discharge ducts. The latter is particularly suitable for floor mounting. These heaters should be protected from lint and dust, which decrease the efficiency of the heat transfer when they accumulate on the heating coils.

A most important use, and yet an unusual one, of the unit heater is in the dissipation of fog and excessive moisture in certain departments of the finishing plant. This is done by having the unit heater introduce into the department large volumes of heated air of low moisture content. This air mixing with the fog absorbs moisture and condensation, thus improving working conditions by lowering the humidity, eliminating condensation on ceilings and walls, and reducing the maintenance cost of equipment.

Most systems of heating, whether pipe coil, pressure or vacuum, or unit heater, are now subject to accurate temperature control. This usually consists of a simple thermostat in which expansion and contraction of metal or fluid control a pilot air valve, which in turn directs compressed air in operating a diaphragm valve which controls the steam flow to the coils, the air for the control being supplied by an air compressor. When the temperature in the room reaches a predetermined minimum, steam supply to the coils or unit heater is shut off, when the temperature drops to a predetermined maximum, the supply is again opened, and so on. This replaces the old system, in which the foreman of a department manipulated the valves to suit his particular sense of feeling, which might vary from Monday to Saturday—and which was always 4 or 5 degrees late either way. With the automatic control mentioned, temperature can be maintained within one degree. The system soon pays for itself in savings of fuel, not to mention the attendant savings due to the production of more uniform and suitable process conditions.

Temperature control and recording are also available for heat processes such as slashing, dyeing and bleaching; and are otherwise advantageously applied whereever variation in temperature reduces the quality of product or the speed of production. In slashing, the steam supply to mixing kettles is automatically controlled to fix the time involved in bringing the size to the cooking point, and to maintain it at that point thereafter; in the storage kettles, size box and slasher cylinders to maintain constant temperature.

Associated closely with temperature in its effect upon process and operative is humidity. Development has followed the general load of heating. Air washing used to be applied to the old central fan blast system, to humidify all departments; but now it is a good policy to install separate units for the different departments—carding and roving, spinning, weaving—all of which vary somewhat in the degree of humidity desired. The atomizer system, long a standard, has given way to motor operated fans, "high duty head" systems. Humidifier controls have been improved, so that in addition to furnishing proper atmosphere for the process, and saving steam, humidifiers do considerable cooling in summer, making the mill interior 5 to 10 degrees cooler than the outside. Even the picker-room has succumbed to this demand for manufactured weather—it is now humidified.

An incidental advantage of controlled humidification is in the sale of goods. Commercial practice permits in goods a certain moisture content by weight. Goods sold with less than allowed are sold at a loss to the manufacturer, yet water cannot be added promiscuously; it must be added as a matter of humidification in process.

Recently, a serious effort has been made to combine the functions of heating and humidification—the result

(*Continued on Page 24*)

Discussion on Spinning at Henderson Meeting

A NUMBER of interesting questions on spinning were discussed at the recent meeting of the Eastern Carolina Division of the Southern Textile Association at Henderson, N. .C The discussion was led by D. F. Lanier, superintendent of the Oxford Cotton Mills, Oxford, N. C., and was as follows:

(Led by D. F. Lanier)

Professor Hilton: I think before starting on the discussion of long draft a description of the different makes of long draft should be taken up, especially the double-apron system, single apron, four-roller, Belger roller, and lightweight wooden-covered roll. But the main thing about long draft is to cut out machinery in the preparatory processes; I don't mean to cut out all the machinery, but you can spin from single or double roving. Single roving, naturally, will give you the best spinning. The next thing to consider is the number of fibers that are controlled between your rolls. It is claimed by practically all the makers that about 80 per cent of those fibers are floating—not controlled by the rollers. It is claimed by someone that in each pound of cotton about 26 per cent is all of the staple that you pull. That means you are controlling that amount of fibers. In long draft you can set closer, because you do not have the weight close to the front roll.

Long Draft Systems

Mr. Thomas can tell you more about the Casablanca than I know. On the Saco-Lowell they have a weighted middle roll. On the Belger there is a weight that presses down and gives you more contact with the middle roll. On the Washburn you have a leather-covered roll, which gives you slip draft. On all but the slip draft they figure that the back and middle rolls do the breaking and control those fibers between the second and third rolls. I can probably answer questions better than I can explain it.

Mr. Tatum: How much do they increase the draft between the back and middle roll over normal draft?

Mason P. Thomas, Selling Agent, Whitin Machine Works, Charlotte: That depends on the staple of the cotton.

Mr. Tatum: What is the most?

Mr. Thomas: It runs from 109 to 130.

Chairman Lanier: We will have Mr. Thomas tell us of some of the benefits derived by changing of long-draft spinning—the benefits of long-draft spinning as compared to our conventional spinning.

Benefits From Long Draft

Mr. Thomas: The best way I can tell you about this thing is to cite you to certain individual cases that we know have taken place. There are two uses for long draft, as we know. One is to make better yarn or better cloth, as the case might be, from slightly longer drafts; another is to save labor. Most of us use it to save labor, because we are pretty well satisfied with what we are making. I have in mind a mill that changed to long draft which is producing yarn, according to their own figures, of five pounds better breaking strength. How much is attributable to long draft and how much is attributable to new rings, new spindles, new bobbin, etc., is questionable; but they attribute it to long draft. To get the maximum benefit you have to have roving machinery that is adapted to long draft. In this particular mill they did not have to buy new machinery. If you are running double roving you eliminate, roughly, from 40 to 45 per cent of your spindles all through the process. In that particular case I cited they eliminated all the fine roving.

I have in mind another mill, on coarser counts, making 8s, 9s, and thereabouts, which runs straight from 50-hank roving on the slubber. Successful long draft depends somewhat on the quality of the work you are putting out, as to how much it can be used and to what advantage it can be used. It will vary in each individual mill and vary with the preparation you give that cotton and vary with the specifications of your roving. Any mills that are interested in long draft should request their engineering concern or some machine builder (if they are interested to the point of wanting to find out for their particular mill) to make a survey and decide what installation is needed for their individual use.

Long Draft for Old Frames

Chairman Lanier: Can you tell us something about long draft as applied to old frames?

Mr. Thomas: Long draft as applied to old frames—on filling yarns you have a very much broader field. The specifications of the machinery determine its value; it is not the physical condition of that machinery at all, necessarily. You can take a coarse yarn mill today, with the machinery mechanically perfect, but the specifications might be wrong, and you would be completely out of the picture. But in filling the situation is different. It would be rather absurd to change over a frame on warp yarns if it would still be obsolete when you change it over.

Mr. Harden: Take 22-hank roving; that is about a normal set-up. Does he recommend retaining two-process roving in the card room, or three-process, and keep the speeders, or would he do away with the speeders in an instance of that kind?

Mr. Thomas: We recommend whatever you want to do, naturally, but most of our experience along that line has been that if you run four hank roving you run three processes. Most of the mills eliminate the fine process entirely. You could eliminate the 9 by 4½ single roving.

Mr. Harden: Your answer to that would be that that would make the best work?

Mr. Thomas: As I said a while ago, there are two uses—to improve the quality of the work and to save labor.

Mr. Harden: To retain the same quality of the work? In making sheeting, breaking strength is paramount. That is why I asked that question.

Mr. Thomas: I think you could reasonably expect to retain the same breaking strength, and if it were my mill I would go to single roving.

A Mill That's Changing Over

Mr. Holt: Gentlemen, speaking of long draft, I should like to tell you of a mill that is being changed over at present. I can not give you the results, because none of it has been changed yet. The organization of this mill was three processes of roving, one process of drawing, double creel spinning, making 22s warp yarn. It will be changed over in this manner. Between the cards and the drawing will be installed a machine that will double the card sliver approximately sixteen times, making it in a lap form and giving it only enough draft to blend it. Those laps will be of such length that one lap will make one can of finished drawing sliver. That lap will be taken to a drawing with a draft on it of approximately 16. In other words, the weight of your finished drawing sliver will be approximately the same as the card sliver, but instead of being a four-roll drawing it will be a five-roll drawing, with a graduated draft between the rolls all the way through; the greatest draft, of course, being between the first and second roll. From there this finished drawing sliver will go to the slubber, and from there to the intermediate, and from there to the finisher for spinning in long draft, where it will have a draft of about 16 on ⅞-inch cotton. We can not tell what the results will be but are assured by the machinery builders that the breaking strength and evenness (which are independent) will be as good as before, and probably better. In this same plant we have not done away with our filling frames—that is, all of them. We have some frames that have been in operation for several years, and those frames will be changed to long draft. Ten of those frames are band-driven frames; the others are tape-driven. The question that we have asked, and the question that has been asked us, is, other things being equal (that is, the frames being in good condition), would it pay to change a band-driven spinning frame? We are told that it would pay. In fact, some people even today prefer a band-driven spindle to tape-driven.

That does not have any bearing on this question directly, and yet that does give you quite a departure from the usual thing that you find in the textile trade, and that is one of the things that long draft is bringing you. I just thought you might be interested to know that that outlay is being put in.

Chairman Lanier: Are you applying this long draft to those old spinning frames, Mr. Holt?

Mr. Holt: Yes, sir.

Mr. Harden: You have an extra line of roving in there, haven't you?

Mr. Holt: Yes.

FRONT ROLL SPEED

Mr. Mullen: In an unusual installation of long draft can you maintain as good front-roll speed or higher speed than on conventional draft? Do you expect to maintain as high front-roll speed as you would on double roving 22s warp yarn?

Mr. Holt: Yes. We intend starting with the same front-roll speed that we now have but shall use a variable drive and build that speed up as the bobbin gets larger. But, answering his question, we shall start at the same speed.

Question: What is your speed on 22s?

Mr. Holt: 128.

Mr. C.: What is it when it finishes?

Mr. Holt: Well, we don't know.

Mr. Faris: I shall not say it is not successful, but I have not seen it. I have tried everything, long roller, short roller, iron roller, and have not been able to get any way that is successful with long draft on regular spinning. As to long draft, I have never run any. I do know there is right much confusion as to what the limit of long draft is. Some say 12, some 15, some say 20. I have visited a mill using long draft and was reliable informed they were drafting 15. They did not have this process Mr. Holt was talking about. I believe that process he spoke of will be successful. But just to take an inch of roving and make yarn of it, unless it has been doubled somewhere, I have not seen it yet.

Mr. Rose: Is anybody here running long draft at present? (No response.) That puts me in a little better position. I ran some tests two years ago with a long-draft spinning frame. Possibly that is out of date, but it will give you some idea what we did do. What do you consider normal draft for a long-draft spinning frame?

Mr. Thomas: Single or double roving?

Mr. Rose: Single.

Mr. Thomas: It would be 12-14-15—something like that, depending on the cotton and what preparation you are putting behind it.

A TEST ON LONG DRAFT

Mr. Rose: This was Casablanca rolls. I used .62 hank roving, for 16s warp yarn. Total draft of frame 27.53. Front-roll speed 120 R.P.M. That yarn broke at 92, 99 and 99. At the time I made a notation down here that the yarn ran good. That was spun on a 2¼-inch ring, right much quill being used. You see, I had this frame and could not make all the speed changes I wanted to; I kept changing one thing and another.

Then I ran some 24s twist—made that out of 1.64 hank roving, double creel, with a total draft of the frame of 29. Front-roll speed, 140 R.P.M. That did not run so well. I made a notation down there that it ran too fast.

I ran some 20s warp out of 1.60 hank roving, with a front-roll speed of 135 and a total draft of 25.6. I have some breaks down here, but not all good. Those 20s broke between 80 and 90, on an average.

I also ran some soft twist 16s out of 1.60 hank roving, with a total draft of about 20. I haven't the breaking strength on that. The front-roll speed was 125. That ran fairly good.

I ran some soft twills out of slubber roving, single creel, .62 roving. Front-roll speed, 145. I liked the way that ran.

Then I ran some warp twills, single creel, 162-hank roving. That ran good. Front-roll speed, 155.

I expect from what this gentleman over here says I was running right much draft on it, but I was very much pleased with the operation of the frame. It was a frame lent to the Harriet Cotton Mills to experiment with. I believe it had 18 spindles on each side, individual-drive frame, tape-driven. I believe they sent it to us equipped with a motor and rope drive. We were very much pleased with it.

There is one question I should like to ask. Does anyone know how much trouble it is to keep those things cleaned up? I tell you what we did; we ran that thing all day and did not assign any spinner to that side. We did not have anyone appointed to clean it. We did have the ends put up, but just let it run, to see in how bad shape it would get and run. It ran all the time we had it, and we were very much pleased with it. The yarn tested very favorably with some of the yarn we were making.

Can anyone tell me about how those leather cots work, and how bad they are about stopping on you, etc.?

Mr. Thomas: We have had mills running (I say "we;" I don't want anything I say here to be regarded as a reflection on our competitors, and I am sure anything they might say would not be a reflection on me;

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New Dyeing Effects on Cellulose Material

The affinity of rayons for the various dyestuffs varies according to whether we are considering the regenerated cellulose type of artificial silk of the viscose, cuprammonium, or nitrate class or compounds of cellulose such as the well known acetate, Celanese. In general, one may say that the regenerated cellulose may be dyed with the same dyestuffs and in the same manner as with cotton. The case of the nitro-silk is different in one particular as it may be dyed directly with the basic coloring matters, whereas cotton, linen, and the other regenerated rayons require a mordant. A further difference lies in the fact that it has a lower capacity for the ordinary direct dyes, while both viscose and cuprammonium rayons have a greater affinity than cotton.

Cellulose acetate is not affected by the usual cotton dyes except in one or two cases, but it may be dyed with the basic colors. Special dyeing methods have been invented for dealing with the cellulose esters and the best known is by means of the S. R. A. colors, where certain dyestuffs are dissolved in cold or boiling oils to form coloidal solutions which on dilution, and usually with the addition of soap and ammonia, are capable of being absorbed by the cellulose acetate. An alternative but less common method of dyeing cellulose acetate depends on the use of the Ionamines, which are basic compounds rendered soluble by the addition of an omega-sulphonic acid group, and are hydrolyzed to the free base in a slightly acidic or alkaline bath. As this base is produced, it is absorbed by the acetate rayon and a large number of the dyestuffs so produced are capable of being diazotized and developed on to the fibre to produce new colors.

It is obvious that we have two classes of dyeing material, apart from the other physical and chemical properties, cellulose and cellulose esters, and it is now a matter of textile history that the esterification of cellulose without permitting it to lose its fibrous character has resulted in commercial success, rayon having been made resistant to the cotton colors in the so-called immunized yarn. The first successful method was that of the Sandoz Company which used paratoluenesulphochloride, a by-product from the manufacture of saccharin, as the esterifying agent. Many acid chlorides were used for esterification and probably the best method employed was that which resulted in a modified acetylation process.

The question then arose as to whether it would be possible to confer on cellulose material the dyeing properties of the animal fibres, such as wool and silk. If the problem of making rayon like cellulose acetate could be solved without loss of fibrous structure, could it not be made like real silk in its affinity for dyes? The obvious step was to consider the chemical differences between the vegetable and animal fibres; the presence of nitrogen in the latter being well known, was an obvious starting point. In the manufacture of nitrate silk, a nitro-cellulose is formed which has the dyeing properties of the animal fibres but this class of rayon is very inflammable and is always denitrated by means of lakaline sulphides. Attempts to work on this type of product by combination with an ester have not met with great success and a nitro-acetate of the desired type has still to be made. It appears to be impossible to obtain a nitro-acetate combining practical solubility with non-inflammability.

In 1892, Vignon claimed that he had succeeded in producing an amidated cellulose by treating cotton with strong ammonia at a temperature between 100 and 200 degrees C. It has also been claimed that similar results could be obtained by treatment with calcium chloride-ammonia. These methods were not entirely new, for in 1861, both Thenard and Schutzenberger claimed to have produced an amidated cellulose by treatment with ammonia in an autoclave. Apparently none of these results was reproducible, and it has been suggested that the amino compound was merely cellulose in which the air space was filled with ammonia.

Some five years ago, however, Karrer and Wehrh decided that esterfied cotton would be a good starting material for the production of amidated cellulose, and they found that it reacted readily with ammonia, the primary and secondary amines, hydrazine, etc. The reaction appears to proceed very readily—being complete in 60 minutes at 100 degrees C.—but may take several weeks in the cold. The amidated product contained 0.8 per cent of nitrogen and possessed remarkable properties. The ester from which it was made resisted the direct dyes but had an affinity for the basic coloring matters, which affinity was diminished in the case of the amidated product and may be destroyed on prolonged treatment with ammonia. Actual tests with acid dyestuffs showed that the amidated cellulose has a greater affinity for this type of coloring matter than wool itself, nearly all the dyebaths exhausting well at the boil. The method of dyeing used was that usually employed for the animal fibres. In general the degree of fastness compared favorably with that of the same colors on wool but there were some exceptions. The introduction of amino groups into cellulose gives it an affinity for the acid dyestuffs, probably on account of the formation of salts by the action between the acid dyestuffs and the amino groups of the new product.

The immunizing processes gave a great impetus to the technique of esterification of both cotton and rayon, and many processes were protected whereby partial esterification took place without loss of structure, and a large number of esterification agents were cited in the patents literature. Research is now being concentrated on the use of these methods for the production of an artificial silk having the dyeing characteristics of real silk.

The affinity of cellulose acetate for dyestuffs may be increased, for example, by incorporating in it one or more cellulose esters containing nitrogen. These esters are obtained by the esterification of cellulose in the presence of cyanacetic acid, aminobenzoic acid, or other organic acid containing nitrogen.

A typical method of producing nitrogenous cellulose derivatives is seen in the treatment with organic bases, of cellulosic material such as regenerated cellulose, incompletely etherified cellulose, or carboxylic esters which are not saponified by the treatment. Esters of cellulose with aliphatic acidyl groups may also be treated but in this case the first action of the base is to saponify the ester

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PERSONAL NEWS

Will White has been promoted to second hand in spinning at the Lockmore Mills, York, S. C.

W. J. Bridgeman has become overseer of weaving at the Franklin Mills, Greer, S. C.

W. B. Greer has been promoted from overseer of carding and spinning to assistant superintendent of the Franklin Mills, Greer, S. C.

J. B. Hart, secretary of the Joanna Cotton Mills, Goldville, S. C., is doing well following an operation which he underwent last week end.

Frank G. North & Co., Atlanta, have been appointed Southern representatives for John P. Marston & Co., well known manufacturers of textile chemicals.

W. C. Bradley has retired as president of the Eagle and Phenix Mills, Columbus, Ga., but will continue as chairman of the board of directors.

Veeder-Root Company, Hartford, Conn., manufacturers of textile counters, have opened Southern offices in the Woodside Building, Greenville, S. C. The distribution of their products will hereafter be handled through this branch office of the company.

D. Abbot Turner has been elected president of the Eagle and Phenix Mills, Columbus, Ga. He is also president of the Bradley Manufacturing Company. Frank B. Bradley, vice-president and general manager, John H. Walton, vice-president, and Charles C. Willis, secretary and treasurer, were re-elected.

OBITUARY

THOS. L. WHITLOCK

Laurens, S. C.—Thomas L. Whitlock, 45, textile mechanic, of Goldville, died suddenly Saturday afternoon about 5 o'clock at Laurens. He had been to Greenville and while there he is said to have suffered an attack of acute indigestion. Arriving here he entered a drug store to purchase some capsules and was stricken while being waited on. He is survived by his wife and several children. W. Hampton Whitlock, also of Goldville, is a brother.

Piedmont Chemists To Meet

The Piedmont Section of the American Association of Textile Chemists and Colorists will hold their annual meeting at the Charlotte Hotel, Charlotte, Saturday, October 29. New officers will be elected. John J. Sokolinski, representative of Arabol Manufacturing Company, will present a paper on the manufacture and use of sulfonated and emulsified fatty materials in the textile industry.

The members will go to Davidson, N. C., in the afternoon to see the Davidson-Clemson football game. At 7:30 o'clock in the evening, the annual banquet will be held at the hotel. The address of the evening will be delivered by A. O. Joslin, resident manager and treasurer of the Rock Hill Printing & Finishing Co., of Rock Hill, S. C.

Master Mechanics To Meet

The Master Mechanics' Division of the Southern Textile Association will meet at the Franklin Hotel at Spartanburg, S. C., on Friday, November 4th, at 10 a. m. Chairman E. P. McWhirter has arranged an excellent program, and in addition there will be a talk with slides on "The Value and Economy of Group Drives."

All superintendents and master mechanics are extended a cordial invitation to attend this meeting.

This is the first meeting of the Master Mechanics that has been held since last Fall, and it is hoped that all those interested will attend this meeting, as it will be very beneficial and instructive.

Officers of Cotton-Textile Institute

The following officers of the Cotton-Textile Institute were elected at the annual meeting of the board of directors in New York:

President, George A. Sloan, New York City; vice-presidents, B. B. Gossett, Charlotte, N. C., and Russell H. Leonard, Boston, Mass.; treasurer, Gerrish H. Milliken, New York City; secretary, Paul B. Halstead, New York City.

New members of the Executive Committee include: Frank I. Neild, Neild Mfg. Co., New Bedford, Mass.; G. E. Buxton, B. B. & R. Knight Corp., Providence, R. I.; Cason J. Callaway, Callaway Mills, LaGrange, Ga.; Geo. M. Wright, Republic Cotton Mills, Great Falls, S. C.

The following members of the Executive Committee were re-elected: Robert Amory, Boston, Mass.; Wm. D. Anderson, Macon, Ga.; Harry L. Bailey, New York City; Bertram H. Borden, New York City; C. A. Cannon, Kannapolis, N. C.; Donald Comer, Birmingham, Ala.; Stuart W. Cramer, Cramerton, N. C.; Weston Howland, Boston, Mass.; Robert E. Henry, Greenville, S. C.; John A. Law, Spartanburg, S. C.; Henry F. Lippitt, Providence, R. I.; Gerrish H. Milliken, New York City.

The president and the two vice-presidents are members of the executive committee ex-offcio.

Twenty-seven directors were elected at the meeting of the Cotton-Textile Institute, Inc. Twenty-five were chosen for a term of three years and two for a term of one year to fill vacancies.

Directors elected for three years were: Robert Amory, Nashua Mfg. Co., Boston, Mass.; Howard Baetjer, Mt. Vernon-Woodberry Mills, Baltimore, Md.; C. M. Bailey, Lydia Cotton Mills, Clinton, S. C.; Harry Bailey, 65 Worth St., New York City; John Bancroft, Jr., Jos. Bancroft & Sons Co., Wilmington, Del.; Bertram H. Borden, 90 Worth St., New York City; Wm. H. Buckley, Baltic Mills, Baltic, Conn.; Julius W. Cone, Proximity Mfg. Co., Greensboro, N. C.; Stuart W. Cramer, Cramerton Mills, Cramerton, N. C.; J. C. Evins, Clifton Mfg. Co., Clifton, S. C.; F. B. Gordon, Columbus Mfg. Co., Columbus, Ga.; B. B. Gossett, Chadwick-Hoskins Co., Charlotte, N. C.; Geo. Lanier, West Point Mfg. Co., Langdale, Ala.; John A. Law, Saxon Mills, Spartanburg, S. C.; Russell H. Leonard, Pepperell Mfg. Co., Boston, Mass.; K. P. Lewis, Erwin Cotton Mills, West Durham, N. C.; Henry .F Lippitt, Manville-Jenckes Co., Providence, R. I.; Ronald T. Lyman, Whittenton Mfg. Co., Boston, Mass.; Allan McNab, New England-Southern Corp., Boston, Mass.; G. H. Milliken, 79 Leonard St., New York City; A. R. Pierce, Pierce Mfg. Corp., New Bedford, Mass.; Geo. P. Ray, Riverside & Dan River Cotton Mills, Danville, Va.; J. H. Separk, Textiles, Inc., Gastonia, N. C.; W. J. Vereen, Moultrie Cotton Mills, Moultrie, Ga.; Malcolm D. Whitman, Nashawena Mills, New Bedford, Mass.

The following were elected for one year to fill vacancies: T. E. Ramsdell, Monument Mills, Housatonic, Mass.; J. A. Miller, Exposition Mills, Atlanta, Ga.

N. C. Meeting November 17th

Plans are being made for the annual business meeting of the Cotton Manufacturers' Association of North Carolina, to be held at the Carolina Hotel, Pinehurst, N. C. on November 17th and 18th. The program for the meeting is now being prepared and will be announced soon, Secretary Hunter Marshall reports.

The former custom of holding a summer meeting was abandoned this year and a large attendance at Pinehurst is expected.

Industrial Safety Conference

An Industrial Safety Conference will be held at Robert E. Lee Hotel, Winston-Salem, N. C., November 3rd and 4th, under the auspices of the North Carolina Industrial Commission.

One session on November 3rd at 2:30 p. m. will be devoted to textile plant safety work. Robert McFarlane, of the Sayles-Biltmore Bleacheries, will preside. Speakers and their subjects follow:

"Safety in a Textile Plant," Luther Hodges, Carolina Cotton & Woolen Mills, Spray, N. C.

"Making a Good Safety Record," J. J. Cosby, Jr., the Travelers Insurance Co., Charlotte.

"Methods of Getting Co-operation," T. M. Forbes, Cotton Manufacturers Association, Atlanta, Ga.

General discussion.

Rock Hill Power Rates To Be Reduced

Rock Hill, S. C.—Electric and power rates in the City of Rock Hill will be reduced 10 to 30 per cent pursuant to action of city council, it was announced here, and the changes become effective November 15. City Manager W. P. Goodman estimated the percentage of the reduction and said the city's revenue from its municipally operated power distribution plant will be reduced about $1,200 a month as result of the cut. He hopes, however, that increased consumption of current will reduce this somewhat.

Lighting, power and cooking rates are slashed about 10 per cent and city officials said a saving of 30 per cent would result from the adoption by consumers of a combination lighting, heating, coking and refrigerating rate. Some of the rate changes are: Lighting rate cut from 8 to 7 cents per kilowatt hour for the first 50 k. w. h., power rate cut from 6 to 5 cents per k. w. h. for a similar amount, cooking and heating cut from 4 to 3.5 for 50 k. w. h. The combination rate provides that the first 100 k. w. h. cost 4.5 cents per k. w. h., but when 500 k. w. h. is reached the rate drops to 2.5 per k. w. h.

Quiet Week in Cotton Goods

"This has been another quiet and featureless week with some easing in prices, which has seemed unnecessary in view of the market's splendid statistical position. It is natural that some lines should be quiet at this time of the year, such as the bag trade and mechanical goods as well as other fabrics which are more or less between seasons. On the other hand, there are constructions which are in an exceptionally strong position and on which it is impossible to supply the immediate demand. This is certainly true of various constructions of flannels and on these lines, were they compared with the situation a year ago, their position would be completely reversed. This is also true of many clothing fabrics including those for men's pants and boys' suitings. Their position has been improved tremendously by the recent purchases by the Red Cross of made-up garments," says the Hunter Manufacturing and Commission Company.

"In discussing the finished goods situation with some of the important printers and converters, they report that business recently has been quiet but so far they have had practically no requests for the postopnement of deliveries and in a few instances there have been requests for anticipations. This we feel is a most hopeful angle because it is generally known that jobbers and cutters bought large quantities of finished goods in August and September and it is, therefore, apparent that these goods are steadily moving into consumption, further bearing out our belief that it will take some time for merchants generally to begin to build up fair inventories.

"With the political campaign now in full swing there is no question that it is having its effect on business as a whole. We believe, however, that our general economic problems have been largely corrected and what we mostly need now is confidence. As soon as that is established business will begin to move forward again."

7,311,208 Bales Cotton Ginned

Washington, Oct. 25.—Cotton of this year's growth ginned prior to October 18 was reported today by the Census Bureau to have totalled 7,311,208 running bales, including 246,367 round bales, counted as half bales and 2,526 bales of American-Egyptian.

To that date last year ginnings totalled 9,496,965 running bales, including 318,940 round bales and 3,909 bales of American-Egyptian.

Ginnings to October 18 by States this year were:

Alabama, 617,037; Arizona, 19,735; Arkansas, 752,875; California, 33,521; Florida, 12,771; Georgia, 600,430; Louisiana, 489,684; Mississippi, 721,717; Missouri, 139,987; New Mexico, 14,991; North Carolina, 391,228; Oklahoma, 539,791; South Carolina, 457,101; Tennessee, 157,975; Texas, 2,344,667; Virginia, 13,009; all other States, 4,689.

Eastman Sold Up On Its 1932 Output

Tennessee Eastman Corporation is sold up on its production of acetate yarns for the rest of the current year, A. M. Tenney Associates, selling agents for the firm, report. There is no falling off in the demand for dull luster yarns, with present indications pointing to continued popularity for them during 1933.

Satins woven of dull Eastman yarns are enjoying a good sale, according to silk houses selling these fabrics. The dull taffetas also continue interesting to buyers and there is no falling off in the demand for matelasse weaves. New versions of the last named types are being developed by mills for the coming season.

Inquiries being received from weavers indicate that an increasing number of dull actate novelties will be offered for late spring, provided yarns can be obtained in sufficient quantities. Dull acetate yarns are also in active demand from the knitting trades.

The World's Cotton Position

Discussing the world's cotton position in a statement made to the Association of Cotton Textile Merchants of New York, Prof. John A. Todd, the famous English economist, points out that "the outstanding feature of the last two years has been the renewed evidence of the unlimited capacity of the American cotton crop to falsify all predictions and do the exact opposite of what it did the year before.

"In 1930 the alarming feature of the American cotton situation was the extraordinary change-over of the world's consumption from American to outside growths as the result of three bad American crops in succession, both in quantity and quality, with the inevitable effect on relative values. Two years ago the figures showed for the first time that in one-half the world had apparently consumed more outside growth than of American cotton. In 1930-31 the first half of the season carried this tendency still further, but the second half showed a distinct reaction in favor of American and in the season just closed this reaction has been carried still further. For the time being, at least, American cotton has reasserted its dominant position.

"During the past season the United States consumption of American cotton has steadily declined while that of the rest of the world has increased but exactly the contrary movement is shown in the comparison of the rest of the world's consumption with that of outside growth. The former has been increasing for three half-years while the latter has declined even more. The main cause of this seesaw movement of relative consumption lies in the vagaries of the American crop.

"For nearly two years after the Wall Street crash the fall in the price of cotton was not due, as it was alleged to be in so many commodities, to any excess of supplies; on the contrary, the world's cotton production had been quite moderate and it was only the effect of restricted consumption that gradually began to pile up the world's stocks of cotton, which by the end of July, 1931, were rapidly approaching a record figure.

"The bumper crop of 1931 completely changed the situation. The prospective season's supply, i.e., crop + carryover in 1931-32, was record-breaking (25,445,000 bales) so that a crop far in excess of current consumption aggravated the fall in the price of cotton and brought it down to new low levels in history. Owing to England's departure from the gold standard, Liverpool prices no longer reflected world cotton prices, but in New York on June 9, 1932, cotton futures touched 4.85 cents which compares with the previous low record in history of 4.98 cents in November, 1898.

"Thus the last stages in the fall in the price of cotton were due just as much to the conditions of supply and demand affecting cotton itself as to the general world conditions, though these continued throughout most of the past season to be just about as bad as they could be. The abandonment of the gold standard had produced an artificial rise in nominal prices in England and other countries similarly placed, but gold prices steadily declined, even in America in spite of the efforts of Washington towards reflation.

"When the turn did come cotton had a good deal to do with it. The unexpectedly small figure of the Bureau's August estimate was as great a shock to the market as the big crop figure of August, 1931, had been in the other direction. The sharp appreciation of cotton had a sympathetic effect on other commodities. The fact that the world's carryover at the end of the season had reached the record total of 12,818,000 bales was entirely ignored, and crop prospects were being steadily talked down to about 10,750,000 bales.

"The sentimental effect of the fall from last year's figure of 17,096,000 bales, i.e., from the second largest figure in history to one of the lowest in recent years, completely overshadowed the fact that the prospective season's supply, even with such a small crop, would still be the second largest in history. The change in sentiment had its effect on the actual demand for cotton goods with August sales showing a record figure.

"The effect of the September report on market sentiment was out of all proportions to the facts; and there is very little doubt that the sharp reaction in cotton was one of the chief contributing factors to the general reaction on the Stock Exchange and in commodity prices, which has since developed. Since August, 1931, cotton has played almost a major part in the general tendency of commodity prices. In August, 1931, it was the last straw that broke prices. In August, 1932, it was the first straw that showed the new direction in which the wind was blowing, and the September report was the first sign of a change of wind.

"There is no getting away from the fact that the crisis of the last three years has been due almost entirely to reduced consumption, rather than to excessive production, and any real recovery must depend on a reversal of that condition. The United States figures of raw cotton consumption and production of cotton goods in July of this year, which were the lowest on record, showed the appalling extent to which the restriction of consumption had gone.

"Apparently the world must wait until the Presidential election before we can even hope to see the fundamental problems really tackled. It is hard to see how with all these major problems still unsolved (such as reparations, war debts, tariff and exchange restrictions) there can be any substantial change in what is, after all, the chief cause of the whole trouble—the world's inability to consume goods because of the lack of purchasing power.

"We start the season with a world supply of about 24,000,000 bales of American cotton while the world's consumption last season was 12,319,000 bales. The only thing that can justify a rise in prices is an increase of consumption.

"The statement then goes into an exhaustive discussion of the situation in crops of outside growth such as those of India, China and Egypt. Egypt followed up her big cut in the acreage of 1931 to a little more than half of the record figure of two years ago but although conditions are likely to be more favorable than last year it is not likely that the Egyptian crop will greatly exceed a half yield against the normal of about seven or eight million kantars (kantar equals 100 lbs.)

"There are indications that both India and China will enjoy something more like normal conditions and will probably add a million bales to their crop in each case. With regard to Russia, the feature of the Government's statistics for some years back has always been that their early estimates, according to the plan, were grossly in excess of actual outturn. This year they are promising about two and one-half million bales but it is probable that the actual yield will be less than that. Whether they will again make large exports will depend upon the price and the quality of the American crop.

"In America the chief effect of the Farm Board position has been not so much in anything it has done during the season as in the recurrent fear of the market that it might do something with its heavy stocks, e.g., at the end of April when the mere rumor that they proposed to unload caused a heavy drop in the market. The latest announcement on the 5th of September apparently leaves us with the position that something like 3,000,000 bales will still be held off the market until March or July, 1933, unless the price goes above 12 cents in the meantime." The conclusion to which the survey of the world's position brings Professor Todd is that that is extremely unlikely!

Child Labor

Steady elimination of child labor is one way to slow up the increase in technological unemployment, President Hoover declared last week in his speech on child welfare and the home. It was a reminder of the proposed child labor amendment to the Constitution.

This amendment, approved by large majorities in both Houses of Congress in 1924, is still before the States. It gives Congress power to limit, regulate and prohibit labor of persons under 18 years of age, but specifies that the power of States is unimpaired, except in cases where State laws come into conflict with the amendment.

The States have shown no relish for such an extension of control. On the contrary, they have left no doubt that it is their intention to keep the child labor amendment out of the Constitution. Both branches of the legislatures of 24 States have rejected it. One branch of the legislature in eight States, including Ohio, has rejected it. Six States have taken no action. Only six have ratified it and four more have found it acceptable by one branch of their legislature. Significantly, the only States to ratify the amendment are non-industrial in character.

Obviously, the amendment is dead, as far as possibilities of ratification are concerned. Unfortunately, there is no limit set for its adoption. Like four other amendments it is destined to be an unlain ghost hovering in legislative chambers. Unlike them, however, it is impossible to say as yet that the "reasonable time" limit established by the Supreme Court has been passed. One suspects that the depressing over-abundance of labor at the present time is doing more to eliminate the necessity for a child labor amendment to the Constitution than the frantic lobbying of industrialists ever did. Huge decreases in child employment shown in the 1930 census surely have been augmented by this time.—*Portsmouth (Ohio) Daily Times.*

Precision Gear Moves To Charlotte

The Precision Gear & Machine Co. has completed plans for removing the establishment from Gastonia to Charlotte, N. C., and will be ready to open its new and larger plant in the building owned by Osmond Barringer at 115-121 West Eighth street on November 1.

The plant will continue to manufacture gears and will also specialize in differential lobing machinery for cotton mills and textile manufacturing plants of all kinds.

President E. Frohman, of Gastonia, has returned from New York, where he purchased new equipment for the plant to be opened in Charlotte.

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Norman Thomas Passes Through

Norman Thomas, Socialist candidate for President of the United States, was escorted through North Carolina last Saturday by a galaxy of professors and students from the University of North Carolina and Duke University.

In an account of his speech at Greensboro, N. C., we note the following:

> In his speech here he alluded twice to David Clark, editor of the Southern Textile Bulletin in Charlotte, who has severely criticised State institutions for having Thomas on their campuses as a speaker.
>
> He said that if capitalism's erection of trade barriers was any aid to the rugged individualism it was supposed to foster, "I am a Mohammedan—and that's about the only thing Mr. David Clark of your State hasn't called me in error."

An account of his address at Raleigh said:

> Thomas paid his respects to David Clark, editor of the Southern Textile Bulletin, in no uncertain terms and referred to him as "the editor of the power trust magazine." He said that Clark had called him "everything except a Mohammedan."

It is rather news to us that we are a power trust magazine. No one connected with any power company has ever owned any stock in the Southern Textile Bulletin; in fact, with the exception of one share in the name of a brother and one share in the name of Mrs. Clark, it being necessary to have three stockholders, all the stock of the Clark Publishing Company, owners of the Southern Textile Bulletin, is held by David Clark and no one else has ever, at any time, held any stock or interest.

At least one of the Norman Thomas meetings was presided over by Prof. E. E. Ericson, of the University of North Carolina, and at Greensboro he was introduced by Prof. Newman I. White, of Duke University, described as "a late recruit to the Socialist Cause."

B. C. Proctor and Vernon Ward, of Chapel Hill, N. C., were injured in an automobile wreck and the report said:

> They were going ahead of Norman Thomas on his tour through the State, advertising his coming in auto instead of train, and had covered southeast Alamance and were headed for Chapel Hill when the wreck occurred.

Only a short time ago David Clark was being abused for daring to assert that socialism was being fostered by a group at the University of North Carolina, but a group of professors escort Norman Thomas and assist him in holding meetings while their students rush ahead and proclaim his coming.

They say that both sides are being given at the University of North Carolina, but can anybody visualize one of these socialist professors returning from his trip with Norman Thomas and giving his students the side opposed to socialism.

The effort to pin wings on Norman Thomas and put an angelic expression upon his face is very amusing.

Norman Thomas quit the ministry in order to engage in a profitable racket and has lived very comfortably upon the proceeds.

He was disloyal to his country during the World War.

Four investigations of the American Civil Liberties Union have been made by legislative committees and after their investigations each of them has declared that it promoted and encouraged subversive and criminal movements.

The Garland Fund is the agency which gives financial assistance to the American Civil Liberties Union.

Norman Thomas is a director and an active factor in both organizations.

Because the Boy Scouts take an oath of allegiance to their country and salute its flag, the Pioneer Youth were organized in opposition.

Norman Thomas was one of the organizers and is a director.

He sponsored one of the American tours of Bertrand Russell, advocate and practitioner of free love and avowed atheist.

The angelical Mr. Thomas may have paid his respects to David Clark "in no uncertain terms," as stated in an account of his Raleigh address, but he dared not discuss his connection with numerous subversive agencies.

He adopted the professor policy of abusing David Clark rather than attempting to disprove his charges.

The socialist professors are elated. Their prince has made his tour with all of them gathered around him while their students have run ahead and strewn flowers in his path.

The professors work a few hours per day, five days per week, with three and a half months holiday in the summer plus another half month at Christmas.

They get salaries of $4,000 to $5,000 per year or perhaps more, and in the case of the University of North Carolina and the N. C. College for Women the money is taken from the pockets of the taxpayers of North Carolina at a time when many far abler men are out of work or working six days in the week, every week in the year, for far less than these teachers of subversive doctrines are receiving.

If we know anything about the temper of the people of North Carolina there will certainly be a day of reckoning.

What New Things Have You?

Exhibitors at the Southern Textile Exhibition in Greenville, S. C., last week told us that when a mill man called at their booths the almost invariable question was "What new things have you?"

It was evident to us that the cotton manufacturers of the South are alive to the necessity of bringing their plants up to date and were seeking information about labor-saving and cost-reducing improvements.

It was evidence to us that machinery and supply manufacturers will have all the business they can handle just as soon as cotton manufacturers begin to see profits and to acquire confidence.

The attendance of mill men at Greenville and their interest in the exhibits was very gratifying.

Connecticut Wages

As the Southern textile industry has been the object of many misrepresentations, we are inclined to give other sections the benefit of the doubt when similar attacks are made and we doubt very much the truth of the following which is taken from a recent edition of the Literary Digest:

> Ten cents is the pitiful weekly wage of a girl apprentice in a Connecticut sweat-shop.
>
> For a dime she works fifty-five hours. At the end of three weeks, when she has earned thirty cents for 165 hours of work, she may get a regular job—at $3 to $5 a week. Or she may be discharged. Revelation of these shocking conditions sends a wave of indignation across the State. Governor Cross and a number of papers unite in a demand that the evil be stamped out. But how? Under the present State laws, the Labor Commissioner says he is helpless to act. Until the Legislature meets to change them, officials are trying to hit upon some temporary remedy.
>
> Disclosure of the conditions was made in a dispatch by Boyd Lewis, New Haven correspondent of the United Press, who quotes Joseph M. Tone, Commissioner of Labor and Factory Inspector:
>
> Connecticut girls work fifty-five hours a week for as little as $1.97, to avoid starvation on the streets, the Commissioner said. They labor in the shirt factories or needle-lofts. Learners get ten cents.

Radical Professors Portrayed

The following satire in verse was published in London, Eng., a short time ago, but it is evident that the writer had knowledge of the tactics of those who teach in colleges in this country:

In all he did, in all he taught, he kept this aim in sight:
To get the deeds of darkness done, disguised as works of light.
And tongue in cheek, he kept, through all, this purposely and steady,
That while the powers of good disarmed, the hosts of hell stood ready.
A daring book was one that dared be everything but clean,
And literary license meant the right to be obscene.
They dubbed right conduct dowdy, called good manners quaint antiques,
And all the virtures of the past just resurrected freaks;
Made modesty a mincing minx grotesque in garb and gait,
And chastity a comic frump absurdly out of date.
And clear through this decisive cant the master thought persisted,
That change is always for the best and must not be resisted,
That progress means just moving on, no matter whence or where."

Slow Market Not Alarming

We do not see any reason for being unduly disturbed over the slow market for yarns and goods that has been noted in the past two weeks. Buyers apparently feel that this is not time to buy except to fill their most pressing needs. At the same time it is evident from the interest that many of them are showing that there is a good potential demand for further large supplies of goods.

Regardless of what effect the election may have on the markets, it is true that there is always a tendency for business to slow up during the last few weeks before a presidential election. One encouraging factor in regard to the election is that those who think general business will take its cue from the stock market are convinced that Wall Street is going to do its best to go ahead, regardless of the result of the election. Wall Street can hardly do anything else.

While the market for textiles is dull now, most mills are running on orders, stocks are low and the cotton manufacturers should concentrate their efforts on holding prices. Business for the fall season is not over yet, and we feel that the present lull will soon give way to more active buying.

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MILL NEWS ITEMS

ANDERSON, S. C.—The Anderson Hosiery Mill has gone on a full time day and night schedule and will continue the program at least for the remainder of the year.

GASTONIA, N. C.—Flood waters of the Catawba River covered half of the looms in the Manville-Jenckes Mills, High Shoals, 346 looms being flooded. Electrical control of the apparatus of the mill was also affected.

A large amount of water poured into the Harden Manufacturing Company at Worth, closing the mill for some time.

GREENVILLE, S. C.—August W. Smith, president of the Brandon Corporation, announced directors in session here had authorized payment on November 1 of a three and one-half per cent dividend on preferred stock totalling $60,000.

The company has not paid a dividend on preferred stock for about the past year. A large part of the dividend from the textile corporation will be distributed in this section.

LEXINGTON, N. C.—Plans have been prepared for the erection of a brick factory building for the Lexington Shirt Corporation. The concern has purchased a lot on East Second avenue, and officials plan soon to begin construction on a two-story 60 by 125 brick structure, which will provide approximately double the floor space of the building now occupied under lease.

COLUMBUS, GA.—Muskogee county textile mills are running at practically full time with increasing orders and a resulting boost in employment and payrolls.

Meritas Mills reported business 32 per cent better than for the same month last year.

Perkins Hosiery Mills are running at a 100 per cent increase in the yarn department.

The Georgia Manufacturing Company reported the best yarn business in "10 or 15 years' with business double that of a year ago.

The Bradley Manufacturing Company and the Eagle and Phenix Mills are furnishing employment to 50 per cent more workers than in recent low months and orders have increased 20 per cent.

HUNTSVILLE, ALA.—A partial victory has been won by the Hunter Manufacturing and Commission Company of New York City in the decision of Referee Jere Murphy of the bankruptcy court, who sustained part of its claim of $2,050,000 against the assets of the Lowe Manufacturing Company, bankrupt.

The referee's decision upheld the Hunter claim which had been accumulated prior to March 12, 1928, and amounted to approximately $1,200,000. The balance of the claim was set back of the claims of preferred stockholders of the Lowe Mills, Charles Lane Poor of New York being the principal one. Preferred stockholders charged that officials of the Hunter company, having acquired control of the Lowe Mills, operated it for the benefit of other textile concerns which they controlled and caused it to incur debts that brought it into bankruptcy.

MILL NEWS ITEMS

BELMONT, N. C.—The annual meeting of the stockholders of the Climax Spinning Company and the Majestic Manufacturing Company was held at the offices of the company. The usual routine of business was transacted. These mills are running as usual and business appears to be slightly improved, it was pointed out. The board of directors was re-elected. The officers and directors of these mills include A. C. Lineberger, president; D. E. Rhyne, vice-president; S. P. Stowe, secretary and treasurer, and in addition, R. L. Stowe and W. B. Puett are directors. A number of stockholders from Charlotte, Gastonia and Mount Holly attended the meeting.

ROCK HILL, S. C.—The Highland Park Manufacturing Company here announced that changes and replacement of machinery in its textile plant costing approximately $100,000 will be started at once.

The plant, closed since May 23, 1931, will reopen January 1 when the new machinery has been installed, the announcement said. It will give work to 250 persons.

All help, except technical, needed in remodeling the plant will be drawn from the mill's village.

The opening of this plant will put virtually all of this city's industrial plants to work, with more than ?????? persons employed in them.

NEW ORLEANS, LA.—It is expected that the new department of the Lane Cotton Mills, being constructed to double capacity, will be ready around October 25. With this equipment, the plant will have a total of 2,600 looms. At that time the Lane Cotton Mills will have completed their program to produce practically anything that would come within the range of colored goods or related materials. Where formerly they had manufactured only 28-inch widths, the new equipment will take in fabrics as wide as 60 inches, including twill and dobby as well as plain weaves. The dyeing division will be complete in every respect, it is stated, and able to do work with vat colors, sulphur and direct colors. One of the most important features of the mill's equipment is the shrinking plant.

SPARTANBURG, S. C.—A group of large stockholders of the Enoree Mills who received cash and shares of stock in the liquidation of the mills before the debts of the corporation were paid attended a hearing in the case of the Bank of Belton and others against Allen J. Graham, individually and as president, treasurer and liquidating agent of the Enoree Mills, before E. Inman, master in equity for Greenville county, and agreed to return the money and stock paid them and to see other stockholders in an effort to get them to return assets of the Enoree Mills which were received by them. The amount involved is over $44,000 in cash and over 4,209 shares of stock, estimated at $640,000.

The hearing, the third in the case, was upon whether a judgment against the stockholders should be granted, compelling them to return the cash and stocks. Because of the agreement reached between those stockholders present and the creditors the hearing will be held open and will be continued some time next week.

Mr. Inman explained after the hearing that the stockholders acted in good faith in taking the money paid

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MILL NEWS ITEMS

them, it being thought at the time that the mills had ample assets to cover all debts.

The Bank of Belton, the First National Bank of Greenville and the People's National Bank of Greenville brought suit claiming that the stockholders received cash and shares of stock before the debts of the mills were settled, including several large notes due at the banks, and that the money and shares should be returned.

AUSTIN, TEX.—Production at Texas cotton mills during September proceeded at an unusually rapid rate for this season of the year. The twenty-one mills reporting to the University of Texas Bureau of Business Research increased their output during the month by 21 per cent to 4,300,000 yards, as compared with 3,552,000 yards during August, although during the five years 1927-1931 there was an average drop of 2.6 per cent in production from August to September. For the first time this year production during the current month exceeded that for the corresponding month in 1931.

Bales of cotton used at the reporting Texas mills increased from 4,817 in August to 6,088 in September, or 26 per cent; cotton consumption during September was greater by 2.6 per cent than in the corresponding month last year. Active spindles and spindle hours rose in harmony with increased activity and three mills which had been inactive reopened during the month.

Unfilled orders and sales held up rather well during the month, but there naturally was a reaction following the spectacular rise in both of these items during the month of August. Sales, for instance, dropped to 3,822,000 yards as compared with 5,400,000 yards the previous month and were 23 per cent under sales in September a year ago. Although unfilled orders at the close of August set a high for a period covering 29 months, there was a drop of only 11 per cent during the month, so that bookings were 6,713,000 yards at the close of September, or 63 per cent above those at the close of September last year.

CLEMSON COLLEGE, S. C.—The Southern office of the H. & B. American Machine Co., Pawtucket, R. I., announce the sale of a new Model C spinning frame fitted with H. & B. 4-roller high draft system, 3½-inch gauge, 2-inch ring, 8-inch traverse, to the Clemson College Textile School.

BELTON, S. C.—The stockholders of the Belton Mills will hold a meeting on November 15 to vote on reducing the par value of the capital stock from $100 a share to $25.

TAYLORS, S. C.—The new building which has been under construction here by the Piedmont Print Works and the Southern Bleachery, Inc., will be completed and ready for occupancy by November 1. This building is of concrete and modern mill construction and will house the general offices of both companies, and will be used for a shipping room, for cotton and yarn stock will be stored here.

LAFRANCE, S. C.—Involvixng an expenditure of approximately $25,000 the Pendleton Manufacturing Company, makers of tapestries, upholstering, laundry nets, etc., will soon begin construction of a new steam plant which will include the installation of a new 300-horse power water tube boiler.

Contract for the new plant has been awarded to the firm of C. M. Guest & Son, of Anderson, and work will commence on the new structure within the next week or so, it is understood. The contract will include the erection of a 125-foot stack and the boiler building will be of sufficient size to accommodate the new boiler and another of similar size in the event that officials consider such subsequent enlargement necessary.

The new boiler rooms will be available for use about the first of the year.

Clemson Textile Department Takes Part in Southern Textile Exposition

The Clemson Textile Department will have a most interesting exhibit at the Southern Textile Show. This exhibit will consist of various fancy cotton and rayon fab-

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dents. A very interesting feature will be the weaving of pictures of Governor Ira C. Blackwood and Dr. E. W. Sikes, president of Clemson College. Anyone interested in obtaining information about these fabrics or the work of the Textile Department is cordially invited to call at Booth 126B, first floor, Textile Hall.
rics which have been made by the Clemson textile stu-

New Dyeing Effects on Cellulose Material

(*Continued from Page* 12)

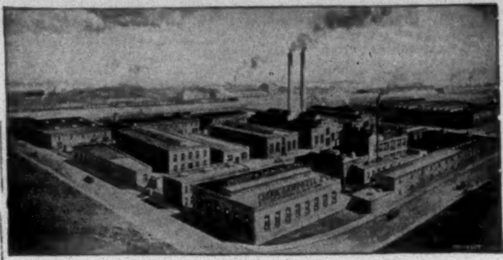
group. Suitable organic bases are the primary and secondary alkylamines and the organic bases, methylaniline and heterocyclic bases.

DIAZOTIZABLE CELLULOSE DERIVATIVES

Other methods at present employed in producing nitrogenous cellulose derivatives capable of diazotization, are illustrated by the use of an aromatic *o*-dinitro-compound in the presence of an inorganic acid-binding agent, other than caustic soda, the resulting compound being subsequently reduced. Cotton, regenerated cellulose and partially acetylated fibres may be etherified with a homologue of a nitrobenzyl halide or with a chlornitrobenzene (other than an *o*-dinitro-compound) containing halogen in an *o*- or *p*-position to a nitro group, in the presence of an acid-binding agent, other than caustic soda, with the production of the desired product. Suitable etherifying agents are nitroxylyl chloride, *o*- and *p*-nitrochlorobenzene, 1-chloro-2:4 dinitrobenzene or homologues or halogen derivatives of these.

The diazotizable textile fibres are produced also by means of a nitrated benzyl halide acting on cotton, regenerated cellulose, or partly esterified cellulose, followed by reduction. The cotton requires swelling with alkali before treatment to make it reactive. Moist cuprammonium yarn, for example, may be treated with fused nitrobenzyl chloride containing powdered chalk, washed, and reduced with sodium hydrosulphide. Mercerized cotton yarn should be immersed in 10 per cent caustic sida solution, washed and treated in an autoclave in the presence of sodium carbonate with a solution of nitrobenzyl chloride in acetone, again washed and finally reduced with sodium hydrosulphide.

The Society of Chemical Industry in Basle has done a great deal on this subject of nitrogen-containing cellulose derivatives and has protected the treatment of alkali-cellulose with a heterocyclic compound containing one or more N:C-halogen groups, such as cyanuric chloride or bromide, or another compound of the triazine series having at least one exchangeable halogen atom. Substances referred to in the first patent, *E.P.* 342,167, are dichloroquinazoline, dichlorophthalazine, dichloride of maleic acid hydrazide or tri-bromopyrimidine. The treated products exhibit changed dyeing affinities, particularly if alcoholic caustic soda solution was employed in the first stage, being now strongly immune to the cotton coloring matters and having an affinity for the basic and insoluble cellulose acetate dyestuffs. The compounds produced by these means may be further treated with a compound containing an NH, OH, or SH group, or a salt of such a compound. Suitable substances are water, alkali, alkali sulphides, and amines. The new products are now not only immune to those dyes which color cellulose, but the strong affinity to basic dyestuffs exhibited by the compounds of the parent class is now more or less replaced by a pronounced affinity for the acid colors. This type



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of process is similar in its results to that referred to at the beginning of this article, i.e., the cellulosic material is first immunized to direct colors but given affinity for dyes of the acetate type, which affinity is then replaced by that for the acid dyestuffs.

A modification of this process is made by treating cellulose material with a compound containing a N=C-halogen group so as to produce a compound containing at least one reactive halogen group, then treating the product with a compound containing an exchangeable hydrogen or equivalent atom and at least one choromophore or group capable of forming a dye, or a residue capable of being converted into such a group. The product so obtained may be converted into a dye by diazotizing and coupling with a coupling component or by coupling with a diazo compound. The dye may be further treated in a variety of ways. The process may be modified by first causing a compound containing at least two N=C-halogen groupings to react with a compound containing an exchangeable hydrogen atom and a chromophore or residue capable of conversion into such, and then causing the product to react with alkali-cellulose. These new products are obviously of value in the formation of colored effects in mixed fabrics.

There is no doubt that a great deal will be heard of these new reactions and new methods of cellulose chemistry in the near future. The reactivity of suitable nitrogen containing groups in general organic chemistry shows that there is a very large field to explore and one that will yield results of commercial value.

The alternative method of producing rayons of the type which has affinity for the acid coloring matters is by regenerating either real silk or wool, and it is unlikely that the raw material will ever be as abundant as cellulose.

This new chapter of cellulose chemistry is also very refreshing to any organic chemist who may feel alarm at the great publicity given in the scientific and textile journals to the examination of cellulose and its compounds by X-ray analysis. It is perhaps unfortunate that this aspect should have been exploited by academic investigators when the patents literature shows that many new organic reactions of cellulose could very profitably be studied and examined in the research laboratories of our universities.—*The Rayon Record.*

The Development of Auxiliary Services to the Textile Plant

(*Continued from Page* 9)

being the unit humidifier. This would seem to promise a real saving in space and equipment, but has not yet been completely developed on a commercial scale. Such units would perform all three functions, heating, humidifying and ventilating. The latter function is of ever increasing importance because of the increase in speed and power of various textile machines, which means that a much greater motor and machine heat must be dissipated; this heat becomes particularly bad when motors are concentrated in motor alloys.

Improved lighting has added much to the productiveness of the mill through increased efficiency of operatives and uniformity of products. Illumination intensity has been increased from well below 5-foot candles to over 5 in many plants, with intensities in some departments exceeding 10. New fixtures have made possible this high illumination without glare, with the trend toward a compromise between general and localized lighting. There has been considerable development work going on in connection with vapor lighting, and the possibility of supplying to mercury vapor lights some inert gas which will provide enough red rays to give natural color effects.

Many of the small services of the mill are now more conveniently handled through the use of electricity. Many plants are wired for the use of calling systems, telephones, signal lights of various sorts, vacuum cleaning systems, small portable tools and for remote control or indication of many operatinos.

I have given you in the foregoing the high lights of auxiliary equipment development as I see them. To my mind, there are at present greater possibilities of profit in the study and betterment of these than in change of process. There has been such marked advance in this field in the past ten years that a plant built more than four or five years—or for that matter, one built more recently, if not accorded capable engineering design—is bound to be below satisfactory efficiency, unless it has been recently analyzed and rehabilitated. Some of the older plants through such betterment are today operating at higher productive capacity and efficiency than their younger brethren.

The development of these services is the contribution of the engineer to the textile industry—perhaps more definitely than any other contribution. For this reason, in taking advantage of the development, it is essential that the manufacturer have availabble a capable engineer, either employed or consulting. In the past, there has been a decided tendency on the part of the manufacturer to depend entirely upon the ideas and counsel of men who have had wide practical experience, but little or no engineering background or training. In the old days, low investment cost and liberal profit sanctioned this. But with competition as keen as it is at present, and as keen as it promises to be, it is necessary for those responsible for an industry to have it carefully studied and guided by those of proper engineering ability and experience. Real engineering thought will reduce the investment involved to an economic minimum, and give the lowest operating cost conducive with the improved quality and reduced waste demanded by competition. With all due respect to the man of practical experience—and respect I have in plenty—if he has not added to this a degree of engineering training, either in some technical school or through technical study—there are many who have made themselves invaluable by doing so—he is not qualified to pass judgment. There is going to be in the textile industry, a constantly increasing demand for highly trained engineers. But the executives should be very careful in his choice of such an engineer—for as there are overseers and overseers, so there are engineers and engineers!

In closing, I shall not try to prophesy concerning future development of these auxiliary services to the textile mill. May I merely hazard a guess that it will not be long before the textile process is under even more automatic control than at present, before windows are kept closed, summer and winter, with weather inside the mill tailored to fit, with daylight coming through actinic glass or some other medium of similar advantage, and artificial light from electric units which give carefully regulated intensities and natural color effects? And let me also guess that the engineer will have more and more influence on the design and operation of such plants, as time goes on—he has already extended his sphere of activities from the mere technical to that generally known as "humanics." Further and natural extension will intensify his effect upon auxiliary services—both technical and human.

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Durene Group Reports On Movement's Success

Philadelphia. — Members of the Durene Association of America, at a regular meeting of the Association, held here in preparation for the spring cotton season, unanimously reaffirmed their belief in the Association's merchandising and promotional program, it was announced at the close of the session.

The effort to uphold the quality of their products by the members of the association has met with gratifying success, they reported, with the yarn consuming trades, with the stores and the consumer. The steady increase in the number of department stores advertising fine durene cotton merchandise throughout the country was cited in the meeting as an example of the recognition achieved by the association's program.

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More Lower Grade Cotton Is Ginned

Washington. — A decidedly lower grade, but a longer staple, is indicated for the cotton ginned during the week of October 10-15, according to the weekly report by the Department of Agriculture. The comparison is with samples classed at representative gins throughout the belt in the preceding week.

For the United States as a whole, the report shows the proportion of strict middling and better to have declined from 35 per cent to 25 per cent of the total. Corresponding increases are shown in the proportions of middling and strict low middling. slight increases are shown in the proportion of grades lower than strict low middling, but a slight decrease in the proportion of spotted and yellow tinged cotton. Georgia and Texas are the only States that do not show decreases in the proportion of strict middling and better, with the remaining States indicating decided decreases in the proportions of these higher grades.

For the United States as a whole, there is a slight decrease in the proportion of cotton shorter than seven-eighth-inch, and decided decreases in the proportions of this short-staple cotton for Georgia, Louisiana, Texas and Oklahoma, as compared with samples taken the preceding week.

Discussion on Spinning at Henderson Meeting

(*Continued from Page* 11)

they are doing practically the same thing we are doing)—two print-cloth and sheeting mills have been using it longer than any other mills in the country. The spinners run just as many sides as on the standard. The additional roving offsets somewhat the additional cleaning required. It is of no use for anyone to say it is not more difficult to clean a long-draft frame than a standard frame.

Mr. Harden: I should like to ask how often these little aprons wear out, and how much trouble it is to put them on, and how expensive.

Mr. Holt: I guess you are talking about the double-belt system.

Mr. Harden: Yes.

Mr. Holt: The top roll is taken out, and they are glued around the little rib that the top roller runs on and the other roller. I have seen some figures that the replacement over a period of five years (I don't know how many spindles this was) was one per cent.

Chairman Lanier: One per cent over a period of five years?

Mr. Thomas: Yes.

Chairman Lanier: Does that answer your question all right, Mr. Harden?

Mr. Harden: It might in the next five years mount up to 100 per cent.

Mr. Holt: I could not answer that question. They did say after an inspection at the end of that time that the belts were in good condition.

L. B. Crouch, Overseer Spinning, Rosemary Manufacturing Company, Roanoke Rapids: I do not run long draft, but I am right well acquainted with a mill that does run it. I have to differ with Mr. Holt right much about replacement. I was in that mill Saturday afternoon, after the mill shut down. There were right many spindles that needed replacement.

Mr. Mullen: How long do the spindles have to remain standing when you are putting a new apron on? Of course, in making cots, that cement sets very rapidly. I imagine these cots can be cemented and the cement take hold in a very short time.

Chairman Lanier: Mr. Hilton, do you know?

Professor Hilton: It takes only a few minutes.

Question: Who does that?

Mr. Thomas: The section man, or whoever sets up the spindle. That can be done while the frame is in operation.

Mr. Mullen: It puts how many spindles out of operation?

Mr. Thomas: Two.

REDUCED COST

Mr. Byers: If we do change over to long-draft spinning, there is another feature in which we are all interested, which connects up with the primary reason for changing over—reducing the cost. Would it be the best thing to do is to strive for the largest ring that you could get? Of course, we know that the traveler determines just how fast we can run it. What I should like to know is, what would be the best thing t odo—try to get as large a ring as possible, or buy a frame with a smaller ring and run the front roll faster? In that way, buying the larger ring and counting the traveler speed, you would have to buy more spindles. Would it be better than to buy a smaler ring and run faster? Especially, if you are going to run a large ring, you have to wind it or spool it. Would it be best to buy as large a ring as possible, sacrificing some speed and buying more spindles, or buy a smaller ring and run it fast?

Chairman Lanier: Can someone answer Mr. Byers' question?

Mr. Holt: What does Mr. Byers himself think about that?

USES LARGE RING

Mr. Byers: I tell you the way I feel about it from the cost standpoint; I think the thing to do is to strive for the largest ring possible, because when you go to wind you are going to cut your cost tremendously if you had one-eighth or one-fourth or even more than that. You get so much yarn on, in proportion. I believe, from my point of view, I would buy more spindles and get a larger package and save in my future operations and get lower cost. What does Mr. Thomas think?

Mr. Thomas: I think the number of yarn you are going to make determines that. The bobbin should be one and a quarter longer than the traverse. It depends entirely on what counts you are spinning, and on the spooling and winding. I think on coarse counts (8s, I believe you said) you can accomplish both of them. I thing with a large ring, about 2¼, or something like that, you can accomplish both. Naturally, as the counts get finer you have to cut down the size of the ring. The bobbin has a lot to do with it, too. Some people say they can not run at high speed, but they do not run the right bobbin.

Mr. Holt: Which would get the most yarn on, a 2-inch ring (say, any count of yarn) with a 13/16-inch bobbin, or a 2-inch ring with a 1-inch bobbin?

Mr. Thomas: I can not answer offhand, but naturally I think you would get more yarn with the 13/16-inch bobbin. You can use a heavier traveler with a larger-sized bobbin.

Mr. Holt: In other ords, the amount of yarn you would get on a 2-inch bobbin would not compensate for the difference?

Mr. Thomas: No, sir. The inside of the bobbin is not where you get the yardage; it is the outside.

Mr. Tatum: I should like to help answer Mr. Byers' question. It seems to me you can reach a limit pretty soon on these large-sized bobbins. You have to spend more money for your equipment and more money for floor space. There is a limit you can reach, all right, about that big package. It has to be figured out in each case what it is.

Mr. Holt: Answering the question asked me a while back, we propose to start this frame at 128 and obtain a speed of 140 when the bobbin is three-eighths full and maintain that speed to the end, which would give you an average front-roll speed of 138.1. On No. 22.

Mr. Thomas: What traverse, and what diameter ring, and what bobbin?

Mr. Holt: This test was run on 2⅛-inch ring; 7¾ traverse. Four-inch gauge spindle.

Mr. Crouch: Do you expect the same production you get with 3-inch gauge, with 1¾-inch frame.

Mr. Holt: I don't know. We were testing it on the only frame we had available to test it on. The frame we are putting in is 2-inch, 2½-inch gauge, with separators. This was run on a 3-inch frame, without separators. It seems to me, as far as the limit goes, it depends absolutely on the traveler. We ran that frame on 2⅛ ring up to 148 front-roll speed, and it ran all right.

Mr. Crouch: Did you have a sample frame?

Mr. Holt: Twenty-four spindles.

(*Continued on Page* 32)

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COTTON GOODS

New York.—The cotton goods markets were very quiet last week. Some price weakness was noted in both gray and finished goods. Print cloths prices were from an eighth to a quarter cent lower than during the preceding week. Buyers showed little interest in larger supplies and goods sold were mainly filling in supplies for spot and nearby delivery. Sales of carded broadcloths and sheetings were small, but prices held better than on print cloths.

The opinion was expressed frequently in the market that conditions will show little change until after the election. Buyers see no reason for taking more than nearby needs and will likely continue this waiting policy.

Moderately good sales have been put through during the week on several types of fine yarn staple cloths, and in one or two instances prices had softened in limited centers, although in the main the list showed few changes. A fairly broad range of buyers were taking limited quantities at a steady pace, and while this brought little in the way of the kind of spectacular volume which seems necessary to aid prices, it was bringing in sufficient volume to prevent any important recessions. Southern mills were selling a number of fabrics at around ¼ cent less than Eastern prices, but in many instances Eastern goods were given preference.

Rayon cloths came out in fair amounts, both in first and second hands, for quicker deliveries. Some in the market were beginning to discuss the possibility of a decrease toward the end of the year in yarn prices; but most observers felt that this was unlikely, some holding that producers might conceivably take steps looking toward higher prices at about that time. Meanwhile, a number of buyers were convinced that mills were not likely to show any great disposition to sacrifice goods, and were, therefore, willing to buy ahead, especially since contracts are now available at considerably under what must be paid for spots.

Print cloths, 28-in., 64x60s	2⅞
Print cloths, 27-in., 64x60s	2¾
Gray goods, 38½-in., 64x60s	3⅞
Gray goods, 29-in., 80x80s	5¼- 5⅛
Gray goods, 39-in., 80x80s	5¼- 5⅛
Brown sheetings, 3-yard	6
Brown sheetings, 4-yard, 56x60s	5
Brown sheetings, standard	6
Tickings, 8-ounce	11½
Denims	10½
Dress ginghams	10½-13
Standard prints	7½
Staple ginghams	6½

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YARN MARKET

Philadelphia, Pa.—Only a limited amount of new business was done in the yarn market last week. Sales were scattered and considerable irregularity in prices was reported. Business has been much less active in the past two weeks, but shipments on past orders continue large and spinners report that many buyers are still anxious to have deliveries speeded up. Stocks of yarns continue low and orders for spot delivery are hard to place.

Most of the business in carded knitting yarns has taken place in the range of counts up to and including 18s, but these counts have been most affected by sagging of cotton quotations, so that prices in this group are relatively less firm than in the range above 18s. A similar condition is noted in prices of carded weaving numbers, in which group the sales of the coarser numbers are running ahead of current production, but prices have eased off.

Spinners have shown more resistance lately to attempts made t oget them to grant price concessions, the chief objection to this being that cotton is costing them more in their own neighborhoods than they expected, and in many cases considerably more than is quoted on the New York Exchange. Many of the spinners also are being pressed for deliveries that they did not expect would be called for until later, and this evidence of demand tends to stiffen their price ideas.

In this market, dealers claim the cotton yarn situation remains strong and should continue so at least through the middle of next month, with the probability of another buying movement developing should cotton have a good rally.

Adjustment of their prices by combed yarn spinners averaging about 3 cents a pound lower is regarded here as belated. The delay is said to have given opportunity to salesmen to offer lower prices if customers would defer purchases. It also gave consumers a chance to spread reports of offers made them of combed yarns at much lower prices tha nthose now announced by the spinners.

Southern Single Warps.

10s	14½
12s	15
14s	16
16s	16½
20s	17
26s	19
30s	20

Southern Two-Ply Chain Warps

8s	14
10s	14½
12s	15
16s	16½
20s	17
24s	19
30s	20½
36s	24½
40s	26
40s ex.	27½

Southern Single Skeins

8s	14
10s	14½
12s	15
14s	16
16s	16½
20s	17
26s	19
30s	20
30s ex.	21

Southern Two-Ply Skeins

8s	14
10s	14½
12s	15
14s	15½
16s	16
20s	17
24s	18½
26s	19½
30s	20½
40s	26
40s ex.	27½
50s	31
60s	36

Duck Yarns, 3, 4 and 5-Ply

8s	14
10s	15
12s	16
16s	17
20s	18

Carpet Yarns

Tinged carpets, 8s, 3 and 4-ply	12½
Colored strips, 8s, 3 and 4-ply	13
White carpets, 8s, 3 and 4-ply	14

Part Waste Insulating Yarns

8s, 1-ply	12
10s, 2, 3 and 4-ply	12½
10s, 2, 3 and 2-ply	13
12s, 2-ply	13½
16s, 2-ply	15½
20s, 2-ply	16
26s, 2-ply	18½
30s, 2-ply	19

Southern Frame Cones

8s	14½
10s	15
12s	15½
14s	16
16s	16½
18s	17
20s	17½
22s	18
24s	18½
26s	19
28s	19½
30s	20½

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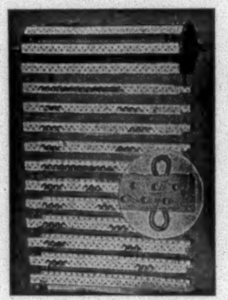

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Hose Group Complete Plans for Conference

Plans for the conference of executives of the hosiery and underwear industry to be held on October 26-27, at the Waldorf-Astoria Hotel were completed last week under the auspices of the National Association of Hosiery and Underwear Manufacturers, the sponsoring organization.

Preparation of the program for the conference has been supervised by an advisory council of forty-three members of the industry appointed last July. Manufacturers of the following products will meet as groups on the opening day of the conference for a discussion of problems peculiar to their divisions: full-fashioned hosiery, women's seamless hosiery, half hose, infants' and children's hosiery, woolen hosiery, underwear.

The morning session of all those present on the following day will be devoted to a report of the association's raw silk committee, dealing with suggested changes in present raw silk classification rules; a report on the condensed cost-accounting manual being prepared by the organization; a report on the proposed statistical service of the association and presentation of a detailed record of the monthly fluctuations of orders received by the industry over a five-year period.

Following luncheon Thursday the entire conference will meet to receive the recommendations of the advisory council. It is probable that the entire afternoon will be taken up by discussion and action on these recommendations. Attendance at the conference will be limited to active principals and chief executives. A record breaking attendance is indicated by reservations received to date, the association states.

Urging that every active member of the association be represented at the conference, Earl Constantine, managing director, said: "It should be unnecessary to point out that the serious fundamental problems of our industry have not disappeared and must not be overlooked merely because of the welcome spurt in business that has developed during the last sixty days. The industry has some very serious weaknesses in its structure. It should be obvious that the only way to improve these weaknesses is for responsible industry executives to study them in conference and to program along lines which will gradually and surely make for improvement."

Spindle Hours Show Big Increase

Washington.—The cotton spinning industry was reported by the Census Bureau to have operated during September at 94.6 per cent capacity, on a single shift basis, compared with 72.4 per cent in August this year and 88.1 per cent in September last year.

Spinning spindles in place September 30 totalled 31,545,832, of which 23,883,948 were active at some time during the month, with the average of a single shift basis, being 29,856,205 compared with 31,643,898; 22,022,490 and 22,896,024 in August this year and 32,586,880; 25,236,916 and 28,722,089 in September last year.

Active spindle hours for September totalled 6,866,031.482 on an average of 218 hours per spindle in place, compared with 5,539,006,107 and 175 for August this year and 6,540,450,573 and 201 for September last year.

Statistics for cotton-growing States were:

Spinning spindles in place September 30 totalled 19,109,940, of which 16,701,442 were active at some time during the month, compared with 19,105,052 and 16,227,232 for August this year and 19,117,322 and 16,838,542 in September last year.

Active spindle hours in cotton-growing States for September totalled 5,327,328,942, or an average of 279 hours per spindle in place, compared with 4,502,973,915 and 255 in August this year and 4,971,443,623 and 260 in September last year.

Active spindle hours and the average per spindle in place by States for September were:

Alabama, 532,187,477 and 285.
Georgia, 869,671,843 and 262.
Mississippi, 53,162,323 and 245.
North Carolina, 1,507,081,464 and 244.
South Carolina, 1,896,627,580 and 333.
Tennessee, 260,465,559 and 349.
Texas, 55,589,210 and 197.
Virginia, 156,673,566 and 231.

Anderson, Conestee Mills Given Lower Assessment

Spartanburg, S. C.—The Board of Review of the South Carolina Tax Commission has granted reduction in assessments of two cotton mills of the State—the Anderson Cotton Mills and the Conestee Mills. The Anderson Mills' assessment was reduced from $621,000 to $612,000, and the Conestee Mills from $127,000 to $112,000, according to official announcement.

The board also affirmed the assessments of the State Tax Commission on the following mills: Langley Mills, Clover Mills, Lexington Mills, Palmetto Mills, Middleburg Mills, Red Bank Mills, Valley Falls Mills, Newberry Mills, Graniteville Manufacturing Co., Clifton Manufacturing Co., Franklin Process Spinning Mills, Clinton Mills, Lydia Mills, Gossett Mills and Riverdale Mills.

Shrinking in General, Sanforizing in Particular

(*Continued from Page 27*)

Mr. Crouch: When you get a hundred on it, it makes a lot of difference.

Mr. Holt: We were running that only as a test.

BREAKING STRENGTH

Mr. Byers: If this should happen, to what would you attribute it? If you were spinning on long draft, and your long-draft yarn, as compared to your regular-draft yarn, was weaker (several pounds weaker, three to four or five pounds), and you were to weave that yarn under the same conditions, why should the long draft breaker stronger in the cloth? It broke slightly weaker in the spinning. Is that due to the less use it went through in going through the different processes of roving, eliminating the rolls? Is it due to that, to the elimination of the treatment the yarn got, or why should that happen?

Chairman Lanier: Can someone answer that question for Mr. Byers?

Mr. Taylor: What did you do—mix your samples?

Mr. Byers: Seriously, I believe the more you treat the fibers of yarn, the more you break it down, and it may be possible for that to happen.

Mr. Harden: I have been around where they were running some long draft and managed to get the folks to let me have a bobbin to take back and break with mine. I do not seem to be able to find a bobbin anywhere that will break as good as mine with regular draft—that is, a larger package. So far I have not been able to find a larger package with long draft that will break as good as mine.

Question: Do you attribute that to the size of the package or to the long draft?

Mr. Harden: To the larger package. I think maybe we are losing sight of quality.

Mr. Thomas: Now, understand that I am not trying to sell you long-draft spinning, but there has not been, to my knowledge, a single installation of spinning sold on carded yarns in the last three years that has not been long draft.

It is not exactly fair to take a bobbin from one mill to another mill and compare it. The settings might be different; the cards might be different. That comparison is not exactly fair. The thing for you to do, if you are interested in long draft, is to go look at fifty thousand spindles of it that have been running eight or ten years and see what it will do.

Mr. Tatum: It may be sour grapes, Mr. Thomas; none of us have long draft.

Mr. Mullen: That test we ran did not prove anything conclusive, to our minds, but I am quite sure that nobody today would put in a new spinning plant without giving serious consideration to long draft. There has to be something to long draft for as many good mills to put it in as have done so. We do not feel justified in installing long draft on our old frames; some of them are twenty-five or thirty years old; but if we were putting in a new installation I would give it very serious consideration.

Mr. Harden: I am not saying anything against long-draft spinning. But the point is I could not get any yarn, made with a large ring, to break as good as mine.

Mr. Thomas: That may be true. But you can get a very much larger ring that conventionally used by using a larger diameter bobbin. I know one concern spinning as fine as 70s on a 2¼-inch ring, using staple cotton. This is a 40,000-spindle unit, and they say they are making the finest yarn in this particular unit of any in the country. They have seven or eight other plants.

Mr. Crouch: I draft 14.25 on 22s, regular spinning frame, now. In regard to breaking strength on the regular spinning frame and long draft, with 2¼-inch ring, the large bobbin broke from four to six per cent better than our regular spinning. That was what the chart showed on a three-months' test.

Question: What long draft did you have?

Mr. Crouch: Sixteen.

INCREASING DRAFT ON REGULAR SPINNING

Chairman Lanier: I wish we could stay on that question longer, but we have another question here, and it is now quarter past three. "What is the best method of increasing the draft on regular spinning; and what is the maximum practical draft on 14s to 20s yarn made from 1-inch Carolina cotton, single or double roving?" Someone wanted to know that. I know some of you men are prepared to tell us what is the best draft for those counts, 14s to 20s, on Carolina cotton. Mr. Jones, I am going to ask you. I expect Mr. Jones is one of the oldest spinners in the meeting this afternoon—I mean from the standpoint of experience in spinning.

Mr. Jones: I have about forgotten all I know. Draft, of course, depends on the grade of cotton you are using and the numbers of yarn. I have drafted 6, 7, 8, 9, 10 and 11—up to 12. I have always thought that I got a better result on about 8 draft. That was what I used to use.

Chairman Lanier: Is that on single roving?

Mr. Jones: Yes. Of course, on double roving you can draft more. I should not like to say any special draft. Sometimes the work will run really well with a high draft, and sometimes it does not run so well when the draft is lower. If it is properly fixed in the card room (laughter), if it is even and clean and the lumps all out, you can run a pretty high draft and get along very well. Of course, you do not always get it that way. (Laughter.) Of course, we all know that the spinning is only a continuation of the carding; we just draw it a little more; and if the carder gives it to you good you are pretty act to turn out some pretty good yarn. I do not want to say what is the best draft; I don't like to make a serious mistake like that; but anywhere between 8 and 10 I think would be pretty reasonable.

W. E. Holmes, Overseer Spinning, Henderson Cotton Mills, Henderson: I don't know that I can tell you exactly what I do think of that. We run on an average number around 22 in No. 1 mill, four hank roving, and draft around 11. We get reasonably good results from that. It seems 22s yarn gives less trouble and runs better than any other number we can get on with that .4 hank roving.

Someone spoke of the traveler. One function of the traveler is to wind the bobbin. If you put on a heavy traveler it winds it tighter. My experience has been that you have to have a traveler suited to your yarn.

Chairman Lanier: How long a draft have you used successfully?

Mr. Holmes: We have used 26, draft of 13.5, on double-creel roving.

Chairman Lanier: Made good, nice yarn?

Mr. Holmes: About as smooth as any.

Mr. Cooper: A gentleman here right now is running rather long draft. He is spinning warp 16s, 2. hank roving, double creel. At the last test the number of ends down per thousand spindles per hour was around 35. The yarn breaks between 90 and 100, just would get to 100. I think that is a very exceptional draft. The yarn apparently looks pretty good, and he is not getting any complaints. If the trade will accept it he will continue to make it, and so far they have accepted it.

Question: What kind of cotton?

Mr. Cooper: ⅞-inch cotton. We buy cotton all together, and this mill is what we call the dumping ground. They get nothing over ⅞-inch. Sometimes it is a little better than strippings, but it does not look good.

Mr. Tatum: I should like to ask these fellows that have run pretty long draft if they have made any changes in the saddles or if they do anything to change the draft gear when they want to increase the draft.

Mr. Vernon: Didn't do anything; just increased the draft.

Mr. Byers: I think if you are going to draft excessively or high draft on regular spinning you should also increase the break draft.

Mr. Harden: We have tried that. In fact, we draft a little over 13 on 23s filling. It was not breaking just what we thought we should get, so we decided to increase the break draft. We increased it one and then two teeth, I believe. That made it worse, and we changed back. We kept that test going for some time and never could get anything out of it.

Chairman Lanier: A few years ago I tried making all the counts out of the same roving. I was making some warps and had to change from a medium to a high draft. I drafted 13 on single roving and changed my break draft to four teeth and got by with it. Those folks took my warps as long as they needed any warps; I got by with it all right. I don't know whether that would work out for everybody or not, but we went along for many years. The machinery builders recommend a difference of one tooth, or two. We found long ago that three teeth are really better than one, and when we have to use high draft three or four teeth is better. We have drafted as high as 13 on single roving. I would not recommend it to you if you have plenty of roving frames, but we could not do any better.

Mr. E.: That depends also on the amount of twist in your roving, doesn't it?

Chairman Lanier: Yes.

Mr. E.: You must have had heavy twist.

Mr. Lanier: Well, we had a carder at that time who thought he ought to put plenty in.

Question: Double creel or single creel?

Mr. Crouch: I changed forty frames. Double creel gave far more satisfactory work. It made fairly good yarn; they wove it without making any complaint.

Mr. Holt: I don't remember what I know about it. I think we changed two frames and tried to change two teeth.

A Basis for Profits

(*Continued from Page* 4)

through the establishment of Governmental control or regulation is open to conjecture. I seriously question whether many business men are prepared to seek this form of relief. It is my belief that it should and will yet be accomplished through voluntary action. But if some are unwilling to improve conditions and to work toward more stabilized employment, try as much as we may to avoid it, you know and I know that sooner or later, somehow, some way, it is going to be done for us. And not nearly as well done as we ourselves can do it.

If the principle of the shorter work week was sound in January, 1930, surely there is an equal if not greater need today for the application of this principle. If there was an urgent need for the concentratiton of operations on the day shift in October, 1930, who would suggest that there should be an abandonment of this principle in October, 1932? If when the Institute was formed in 1926 there was an urgent need for the proper balancing of production with demand, where is the man who will stand today and say that this need no longer exists?

Of all the panaceas and "cure-alls" that have been offered no practical substitute has ever been suggested for co-operation. I realize that there is a general feeling of discouragement largely because of the difficulties through which we have been passing. This is true in all industry. But we must not give ground to these feelings. Today's conditions make it all the more imperative for us to strike out with renewed courage and enthusiasm for those fundamental principles which we know are fair and sound. And tomorrow's problems and opportunities will continue to challenge intelligent co-operation and the very best there is in us.

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Greenville, S. C.—The third day of the Tenth Southern Textile Exposition was featured by sales of textile machinery to a number of cotton mills in this State, with the likelihood that additional sales will be announced before the Exposition closes on Saturday evening.

Lancaster Cotton Mills, Lancaster, S. C., and Brandon Corporation and Dunean Mills of Greenville are among the plants which have purchased equipment at this Exposition.

As compared with former Expositions, sales of machinery have been small. However, it is taken as an excellent barometer that the textile industry is regaining its former position. Many cotton mills are reported to be in need of supplies to replace worn machinery and the sales to be made at this Exposition are but the initial step in that direction.

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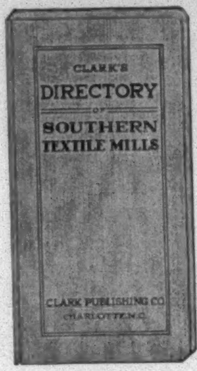

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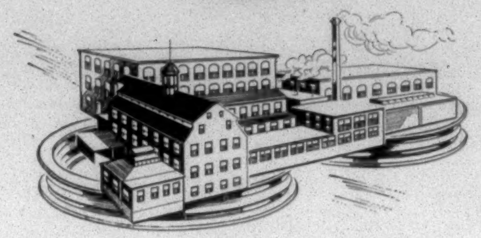

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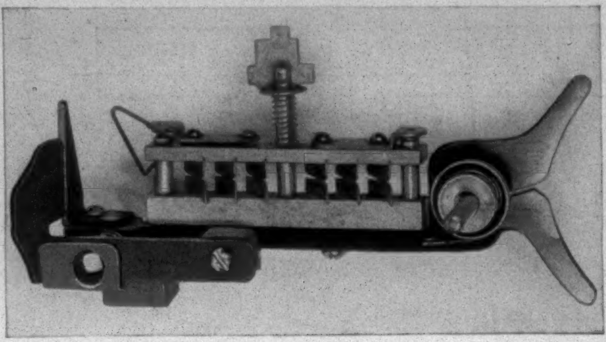

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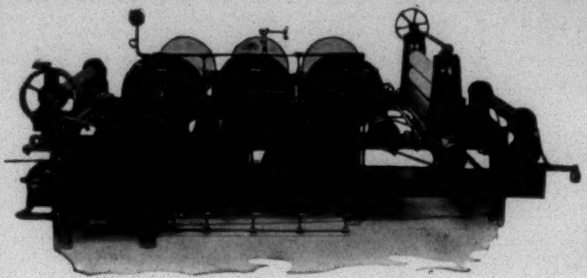

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